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# LIST OF TECHNICAL WORKERS IN THE DEPARTMENT OF AGRICULTURE

AND

# OUTLINE OF DEPARTMENT FUNCTIONS

1931

MISCELLANEOUS PUBLICATION No. 123



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UNITED STATES
DEPARTMENT OF AGRICULTURE
WASHINGTON, D. C.



### UNITED STATES DEPARTMENT OF AGRICULTURE

MISCELLANEOUS PUBLICATION No. 123

WASHINGTON, D. C.

JULY 1, 1931

## LIST OF TECHNICAL WORKERS IN THE DEPARTMENT OF AGRICULTURE

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## OUTLINE OF DEPARTMENT FUNCTIONS

1931

Compiled in the Office of Personnel and Business Administration



UNITED STATES
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### KEY TO ABBREVIATIONS

Abstr., Abstractor.

Acct., Accounts, Accountant.

Activ., Activities.

Admin., Administration, Administrative, Administrator.

Agr., Agricultural, Agriculturist.

Agron., Agronomist.

Agt., Agent.

An., Animal.

Apicult., Apicultural, Apiculturist.

Arbor., Arboriculture, Arboriculturist.

Archt., Architect, Architectural.

Assoc., Associate, Association.

Asst., Assistant.

Atty., Attorney.

Aud., Auditor, Auditing.

Bact., Bacteriology, Bacteriological, Bacteriologist.

Bibl., Bibliography, Bibliographical, Bibliographer.

Biochem., Biochemical, Biochemist.

Biol., Biological, Biologist.

Biophys., Biophysical, Biophysicist.

Bot., Botany, Botanical, Botanist.

Bur., Bureau.
Bus., Business.

Chem., Chemistry, Chemical, Chemist.

Co., County.

Coll., College.

Collab., Collaborator. Comn., Commission.

Comr., Commissioner.

Conserv., Conservation.

Const., Construction.

Consult., Consulting, Consultant.

Coop., Cooperation, Cooperative, Cooperator.

Cytol., Cytological, Cytologist.

Dem., Demonstration.

Dendrol., Dendrologist.

Dep., Deputy. Dept., Department.

Dir., Director.

Dist., District.

Div., Division.

Drain., Drainage.

Drft., Draftsman.

Ecol., Ecologist.

Econ., Economic, Economics, Economist.

Ed., Editorial, Editor.

Engr., Engineer, Engineering.

Ent., Entomology, Entomological, Entomologist.

Equip., Equipment. Erad., Eradication.

Est., Estimator.

Exam., Examiner.

Exec., Executive.

Exp., Experiment, Experimental.

Expl., Explorer.

Ext., Extension.

Fert., Fertilizers, Fertility.

For., Forest, Forestry, Forester.

Forecr., Forecaster.

Geol., Geologist, Geological.

Hdqrs., Headquarters.

Hort., Horticulture, Horticultural, Horticulturist.

Husb., Husbandry, Husbandman.

Hwy., Highway.

Illustr., Illustrator.

Ind., Industry.

Insp., Inspection, Inspector.

Inv., Investigations, Investigator.

Irrig., Irrigation.

Jr., Junior.

Lab., Laboratory, Laboratorian.

Libr., Library, Librarian.

Log., Logging.

Mfg., Manufacturing.

Mech., Mechanic, Mechanical.

Med., Medical.
Met., Meteorology, Meteorological, Meteorol-

ogist.

Mgr., Manager.
Mgt., Management.

Mkt., Market, Marketing.

Microan., Microanalyst.

Micros., Microscopist.

Misc., Miscellaneous.

Mycol., Mycologist.

Nat., National. Natur., Naturalist.

Nematol., Nematologist.

Nutr., Nutrition.

Off., Office, Officer.

Oper., Operations.

Org., Organic, Organization. Parasit., Parasitology, Parisitologist.

Path., Pathology, Pathological, Pathologist.

Pharmacol., Pharmacology, Pharmacologist.

Phys., Physical, Physicist.

Physiol., Physiology, Physiological, Physiologist.

Pl., Plant, Planting.

Pomol., Pomology, Pomological, Pomologist.

Pred., Predatory.

Prin., Principal.

Prod., Production, Products.

Prop., Propagation, Propagating, Propagator.

Pubs., Publications.

Quar., Quarantine.

Refrig., Refrigeration.

Reg., Regional.

#### OFFICE OF INFORMATION

The Office of Information supervises the expenditure of the appropriations for printing and binding for the department; conducts all business of the department transacted with the Government Printing Office; has general supervision of all editing, printing, indexing, illustrating, binding, and distribution of publications, and the maintenance of mailing lists; and maintains an addressing, duplicating, and mailing section to serve the various bureaus of the department. This office secures the circulation in popular form of the discoveries and recommendations of the scientists, specialists, and field workers of the department; gives out to the public press agricultural facts taken from publications and official orders, and also from oral statements of specialists, this material being presented in such form as to attract public attention, be easily understandable, and lead to the adoption of methods recommended; and keeps in close touch with correspondents and other writers, providing suggestions and material for articles. It also furnishes daily, through broadcasting from many stations in all parts of the United States, authentic information of practical use to farmers and others concerning the discoveries made by the department and the farm practices recommended by it; and answers by radio questions in all fields of agriculture and home economics.

#### LIBRARY

The department library, with its branch libraries in the various bureaus, contains approximately 225,000 volumes on agriculture and the related sciences, technology, and economics and receives currently 4,000 periodicals.

The dictionary card catalogue of the main library, containing more than a half million cards, is a record of the book resources of the whole department. It is supplemented by several extensive special indexes which are maintained by the branch libraries in the various bureaus. These together form the most comprehensive bibliography of agriculture and the related sciences available in the United States. A series of Bibliographical Contributions is issued by the library in mimeographed form, and a separate series of Agricultural Economics Bibliographies is issued by the Bureau of Agricultural Economics library. A brief list of the more important accessions to the library is contained weekly in the Official Record of the department. In addition, the following lists are issued currently by branch libraries in the various bureaus: Agricultural Economics Current Literature, compiled by the Bureau of Agricultural Economics library; Agronomy Current Literature and Botany Current Literature, compiled by the Bureau of Plant Industry library; Forestry Current Literature, compiled by the Bureau of Public Roads library; Highways Current Literature, compiled by the Bureau of Agricultural Engineering Current Literature, compiled by the Bureau of Agricultural Engineering Current Literature, compiled by Emily L. Day, library specialist in cotton marketing, Bureau of Agricultural Economics.

#### OFFICE OF EXPERIMENT STATIONS

The Office of Experiment Stations exercises supervision over the operations of the State agricultural experiment stations under Federal appropriations authorized by the Hatch, Adams, and Purnell Acts for research, affords such advice and assistance as will best promote the efficiency of these activities, and coordinates the work of the State stations with that of the department. It also collects and disseminates information regarding similar institutions in foreign countries and publishes the Experiment Station Record, reviewing the progress of agricultural research throughout the world. The experiment stations of the Department of Agriculture in Alaska, Hawaii, Porto Rico, Guam, and the Virgin Islands are also conducted under the general direction of this office.

### EXTENSION SERVICE

The Extension Service cooperates with the State agricultural colleges in the conduct of extension work in agriculture and home economics under the Smith-Lever Act, and acts as an agency for coordinating the extension activities of the several bureaus of the department with similar work carried on by the State agricultural colleges. It conducts demonstrations on reclamation projects to assist settlers in making a success of their farm enterprises. It also has charge

of the preparation, installation, and display of agricultural exhibits at State. interstate, and international fairs and of the motion-picture activities of the department.

### BUREAU OF AGRICULTURAL ECONOMICS

The Bureau of Agricultural Economics conducts studies of the economics of production and marketing, agricultural cooperation, farm organization, farm financial relations, farm labor, land economics, and the problems of rural life. It acquires and disseminates current information regarding the marketing and distribution of farm products; collects, compiles, summarizes, interprets, and makes public statistical data relating to agricultural production, including crop and livestock estimates; studies marketing methods and conditions, and the standardization, utilization, transportation, handling, financing, and storage of agricultural products; prepares and publishes reports on the outlook for farm products; and issues quarterly reports on stocks of leaf tobacco.

Reports are issued which furnish current information on the supply, commercial movement, disposition, and market prices of fruits and vegetables, livestock, meats and wool, dairy and poultry products, grain, hay, feed, seeds, cotton, tobacco, and other products. Information is obtained and published also with regard to the supply of and demand for agricultural products in foreign countries. A market-inspection service is available in many of the principal producing areas and receiving centers on fruits and vegetables, hay, beans, broomcorn, tobacco, and other products, and a grading service is conducted on dairy and poultry products, meats, and canned fruits and vegetables.

Regulatory work is performed in connection with the enforcement of the cotton futures act, cotton standards act, grain standards act, standard container act, standard hamper act, produce agency act, the perishable agricultural commodities act, and the administration of the warehouse act.

### BUREAU OF AGRICULTURAL ENGINEERING

The Bureau of Agricultural Engineering deals with the engineering problems of agriculture. Its work consists chiefly in conducting and reporting upon research projects relating to engineering equipment and practices employed in connection with farm irrigation, farm drainage, control of soil erosion, farm power and machinery, and farm buildings. The bureau, under certain conditions, also renders engineering advice and assistance to other bureaus of the department with reference to facilities needed and employed by them.

### BUREAU OF ANIMAL INDUSTRY

The Bureau of Animal Industry is primarily concerned with the protection and development of the livestock and meat industries of the United States. conducts scientific investigations of the causes, prevention, and treatment of diseases of domestic animals; investigates the existence of communicable diseases of such animals, and aids in their control or eradication; and carries on investigations and experiments in animal husbandry and in the feeding and breeding of animals. It also is charged with the administration of the meat inspection act, the animal quarantine acts, the 28-hour law, the diseased animal transportation acts, the virus-serum-toxin act, and the act relating to the supervision of the business in interstate commerce of packers, public stockyard markets, and commission men, traders, and other agencies operating in the public stockyard markets of the United States.

### BUREAU OF BIOLOGICAL SURVEY

The Bureau of Biological Survey is engaged in those forms of research work, conservation and control operations, and enforcement of laws that relate to vertebrate wild animals (except fishes), in the interests of agriculture, horticulture, stock raising, forestry, and recreation, and the natural requirements of the wild life itself. Its activities embrace field investigations and laboratory studies, including biological surveys of areas, of the distribution, migration. classification, natural history, food habits, and food resources of birds and other animals and their diseases and parasites; experiments in the production of furbearing animals in captivity and demonstration of improved practices developed therefrom; studies of the propagation of game birds; investigations for the

improvement of the reindeer industry in Alaska; and development of effective methods for the control of predatory animals, including stock killers, rodents, injurious birds, and other destructive species. Control operations are conducted by organized field forces in cooperation with State and other organizations. Ninty-three wild-life reservations are maintained for the conservation of game and other animals and birds, and work is underway for the acquisition of numerous additional refuges at concentration points of migratory birds. The bureau administers Federal laws for the conservation of migratory birds, protection of animals and property on wild-life reservations, and prevention of illegal interstate shipments of bodies of wild animals and of the entry of injurious foreign species; and, through representation on and cooperation with the Alaska Game Commission, assists in the enforcement of the Alaska game law.

### BUREAU OF CHEMISTRY AND SOILS

The work of this bureau is organized along three major lines: (1) Chemical and technological research, (2) soil investigations, and (3) fertilizer and fixed-

nitrogen investigations.

(1) Under "chemical and technological research" is grouped the work relating to the application of the science of chemistry to the improvement of agriculture, development of processes for the utilization of agricultural products, and biological investigations of foods, including studies of their physiological effects on the human organism; experiments on the utilization, for coloring, medicinal, and technical purposes of raw materials; development of improved processes in the production of rosin and turpentine; investigations in the development of methods of manufacturing insecticides and fungicides; improvement of methods for dehydrating materials used for food; and development of means to prevent farm fires and dust explosions and resulting fires, including fires in grain mills and elevators, cotton gins, cotton-oil mills, etc.

(2) Under "soil investigations" is grouped all the soil work of the bureau,

(2) Under "soil investigations" is grouped all the soil work of the bureau, including the classification and mapping of the soils of the United States, studies of the agricultural value of soils, their characteristics in relation to productiveness, their origin and development, and their chemical and mechanical compositions; research in soil microbiology; investigations of the response of soils to fertilizers and other soil amendments; and studies of soil erosion, with a view to determining the principles which should guide in the control and prevention of

soil erosion.

(3) Under "fertilizer and fixed-nitrogen investigations" are grouped studies of the fertilizer resources of the country and methods of manufacturing fertilizer materials, including nitrogen and its fixation, phosphates, potash, concentrated fertilizers, organic waste products, and miscellaneous soil amendments.

### BUREAU OF DAIRY INDUSTRY

The Bureau of Dairy Industry conducts investigations of the various problems of dairy production, manufacture, and utilization, and the manufacture and utilization of dairy by-products. New principles and methods developed in the investigational work of the bureau are introduced into the field. The bureau also supervises the inspection of renovated-butter factories.

### BUREAU OF ENTOMOLOGY

The Bureau of Entomology conducts investigations in economic entomology, involving studies in the life history and habits of insects injurious and those beneficial to agriculture, horticulture, and arboriculture, with a view to the development of practical methods for destroying those found to be injurious and promoting the increase and spread of those found to be beneficial. It studies bee culture and beekeeping practices and investigates the life history and control of insects affecting the health of man and animals.

### FOOD AND DRUG ADMINISTRATION

The Food and Drug Administration enforces the food and drugs act, tea act, naval stores act, insecticide act, import milk act, and caustic poison act.

This administration inspects and analyzes samples of the various products coming under its survellance, both at its field stations and in its laboratories at Washington, to the end that it may detect and cause to be removed from the channels of trade all those that fail to comply with the terms of the acts which it enforces. It assists manufacturers to keep their products in compliance with these acts and institutes legal action against those who violate the law. Its primary function is to protect the consuming public against misbranded or adulterated foods, drugs, naval stores, insecticides, and fungicides, the honest manufacturers against enforced competition with such goods.

### FOREST SERVICE

The Forest Service administers the national forests; cooperates with States in maintaining organized protection of forest lands against fire and in distributing planting stock to farmers for windbreaks, shelterbelts, and farm woodlands; conducts investigations in the entire field of forestry, including industrial research and research in forest economics and taxation; diffuses information relating to the best uses of forests and forest products; and, in short, seeks to promote the application of forestry throughout the country on both public and privately owned lands, together with efficient and economical use of the yield. The national forests contain approximately 160,000,000 acres of Government-owned land and nearly one-fourth of the timber in the United States, besides forage and recreation resources of great public value. The administration of the national forests aims to coordinate and develop to the utmost the use of all their resources in the best public interest. Technical methods of forestry are applied to the growing and harvesting of timber. Livestock grazing is scientifically regulated so as to obtain range conservation along with full use of the annual growth of forage. Sustained and, where possible, increased yields of timbers and forage are obtained. Water from the protected watersheds is made available for power, irrigation, and municipal and domestic supply. Provision is made for many other forms of national-forest land use under regulation. Systematic protection is provided against fire and other destructive agencies.

### GRAIN FUTURES ADMINISTRATION

The Grain Futures Administration is charged with the carrying out of the provisions of the grain futures act of September 21, 1922, which brings under the supervision of the Federal Government all trading in grain futures at grain exchanges designated as contract markets by the Secretary of Agriculture. The work consists of compiling daily reports of transactions in grain futures from all markets, in checking the dissemination of false and misleading information which affects or tends to affect the prices of grain, and in making general observations of the entire grain-marketing machinery, with a view to prevent abnormal fluctuations of prices and to create market conditions which will reflect supply and demand. The results of investigations concerning the operations of contract markets are published from time to time for the information of Congress and the general public. In cooperation with other Government agencies, the administration also makes investigations of grain and grain products and by-products, including supply and demand, cost to the consumer, and handling and transportation charges.

### BUREAU OF HOME ECONOMICS

The Bureau of Home Economics conducts scientific studies of problems connected with the home, including questions of food and nutrition, economics, textiles and clothing, and housing and equipment. It assists the homemaker in the solution of these problems by sending information through bulletins, articles for newspapers and magazines, and radio releases. The bureau employs no field agents, but through the home-demonstration agents under the Extension Service and the State colleges it is in close contact with homemakers and professional home-economics workers throughout the country.

### BUREAU OF PLANT INDUSTRY

The activities of the Bureau of Plant Industry are primarily devoted to plant research and related problems. This work includes the study of destructive plant diseases and the establishment of methods of eradication and control; the improvement of crop, ornamental, or other plants by breeding and selection; the

introduction of promising seeds and plants from foreign countries; the improvement of methods of plant production; and the utilization of plants of economic value.

Campaigns to control or eradicate certain plant diseases are conducted in cooperation with the authorities of the States concerned. The 13 States interested in spring-wheat production are cooperating to eradicate the common barberry throughout this area as a means of controlling epidemics of black stem rust of wheat. The New England, Great Lakes, and Northwestern States are cooperating in the eradication of the black currant and related plants as a means of controlling or preventing the spread of the blister rust of white pine. The Gulf States are cooperating in the eradication of the canker of citrus trees and fruits. Georgia and Alabama and other southern peach-growing States are cooperating in a campaign to eradicate the phony disease of peach trees.

The regultory activities of the bureau are limited to the enforcement of the

Federal seed act.

In addition to the experimental activities of the bureau at the Arlington (Va.) Experiment Farm, which is immediately adjacent to the District of Columbia, the bureau is operating field stations or laboratories in practically all the major cropping regions of the United States and is maintaining direct cooperative experiments with the State agricultural colleges and experiment stations.

The bureau is acquiring land in the District of Columbia on which to establish

and maintain the National Arboretum.

### THE PLANT QUARANTINE AND CONTROL ADMINISTRATION

The Plant Quarantine and Control Administration is responsible for the enforcement of quarantines and restrictive orders promulgated under the authority of the plant quarantine act to prevent the entry into or dissemination within the United States of dangerous plant pests new to or not widely distributed within this country. Such quarantines and restrictive orders regulate the importation or interstate movement of nursery stock, fruits, vegetables, cotton, and other plants and plant products likely to carry injurious pests. The administration is also responsible for carrying on, in cooperation with the States, necessary work to prevent the spread of or to eradicate pests which have gained more or less limited foothold. The latter includes quarantines on account of the pink bollworm of cotton, Thurberia weevil, date scale, gipsy and brown tail moths, European corn borer, Japanese beetle, Mexican fruit fly, and white-pine blister rust.

This administration also enforces the act providing for the Mexican border inspection and control service; the act providing for inspection and certification as to freedom from injurious insect pests and plant diseases of domestic fruits, vegetables, seeds, and nursery stock and other plants for propagation intended for export, in order to meet the sanitary requirements of foreign countries; the insect pest act of 1905; and, in cooperation with the Post Office Department,

the terminal inspection act of 1915.

### BUREAU OF PUBLIC ROADS

The Bureau of Public Roads handles the highway engineering work for the department. This work deals with all highway functions contemplated by the regular appropriations, including the conduct of highway research, and also with the work of administering the Federal-aid and forest-road appropriations.

### WEATHER BUREAU

The Weather Bureau has charge of the forecasting of the weather; issue and display of weather forecasts and storm, cold-wave, frost, forest-fire weather, and flood warnings; gaging and reporting of river stages; collection and transmission of marine intelligence for the benefit of commerce and navigation; collection and furnishing of meteorological information and forecasts, including upper-air observations, for the benefit of air navigation; reporting of temperature and rainfall conditions for agricultural interests; and the taking of such meteorological observations as may be necessary to determine and record the climatic conditions of the United States.

### TECHNICAL WORKERS IN THE UNITED STATES DEPARTMENT OF AGRICULTURE

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Imogene P. Earle,\* B. S., M. A., Ph. D., Assoc. Biochem. (nutrition).

Mary B. Potts,\* A. B., Asst. An. Husb. V. L. Simmons, B. S., Jr. An. Husb.

Sheep, Goats, and Animal Fibers—Continued.

J. B. Tenn; son, B. A., Jr. An. Fiber Technol.

David Miller, B. S., M. A., Jr. Chem. (nutrition).

Verna E. Loveless,\* Jr. Sci. Aid.

J. L. Lauth, Jr. Sci. Aid.

#### Horses and Mules.

J. O. Williams, B. S. A., Sr. An. Husb., in charge.

S. R. Speelman, B. S. A., Assoc. An. Husb. L. M. Dean, Sr. Sci. Aid.

#### Poultry.

M. A. Jull, B. S. A., M. Sc., Ph. D., Sr. Poul. Husb., in charge.

T. C. Byerly, A. B., M. S., Ph. D., Physiol. (hatchability).

H. W. Titus, A. B., A. M., Ph. D., Biol. Chem. (nutrition).

H. G. Barott, E. E., Poultry Technol. (physics of incubation).

A. R. Lee, B. S., Assoc. Poultry Husb.

James C. Fritz, B. S., Jr. Biol. (nutrition).

H. N. Harshaw, B. S., M. S., Ph. D., Asst. Biochem. (nutrition).

A. B. Godfrey, B. S., Jr. Poultry Husb. (breeding).

John C. Hammond, Jr., B. S., Jr. Biol. (nutrition).

W. A. Hendricks, A. B., Jr. Biol. (nutrition).

E. McNally, B. S., Jr. Biol. (hatchability).

Ralph B. Nestler, B. S., Jr. Biol. (nutrition).

Marlow W. Olsen, B. S., M. S., Jr. Biol. (hatchability).

John M. Spadola, A. B., A. M., Jr. Chem. (nutrition).

J. P. Quinn, A. B., Chief Sci. Aid (breeding).

S. K. Haynes, Chief Sci. Aid.

Emma M. Pringle,\* Asst. Sci. Aid (physics of incubation).

W. R. Kauffman, Lab. Aid (nutrition).

## Genetics.

H. C. McPhee, B. S., M. S., Sc. D., Sr. An. Husb., in charge.

O. N. Eaton, B. S., M. S., Assoc. An. Husb.

Note.—Workers in genetics are listed under various sections.

#### Nutrition.

Paul E. Howe, B. S., M. A., Ph. D., Sr. Chem., in charge.

N. R. Ellis, B. A., M. S., Chem.

H. W. Titus, A. B., A. M., Biol. Chem. (poultry).

G. H. Kennedy, A. B., Jr. Biol.

Russell E. Davis, A. B., B. S., Ph. D., Asst. Biochem. (nutrition).

Note.—Workers in nutrition are listed under various sections.

O. G. Hankins, B. S., Sr. An. Husb., in charge.

K. F. Warner, A. B., M. S., An Husb. (in coop. with Off. of Coop. Ext. Work). R. L. Hiner, B. S., Jr. An. Husb.

N. G. Barbella, A. B., M. S., Assoc. Biol. Chem.

Nancy Griswold, A. B., Jr. Home Econ. Spec. (in coop. with Bur. of Home Econ.).

Elizabeth A. Engstrom,\* B. A., Jr. Sci. Aid (in coop. with Bur. of Home Econ.).

Gladys Leavell, A. B., M. S., Ph. D., Jr. Chem. (nutrition),

W. G. Rose, B. S., Jr. Chem. (nutrition). W. R. Kauffman, Lab. Aid (nutrition).

#### Extension.

C. D. Lowe, D. V. M., Sr. Ext. An. Husb. (in coop. with Off. of Coop. Ext. Work).

H. L. Shrader, B. S., Sr. Ext. Poultry Husb. (in coop. with Off. of Coop. Ext. Work).

K. F. Warner, B. A., M. S., An Husb. (in

coop. with Off. of Coop. Ext. Work). E. Z. Russell, Sr. An. Husb. (in coop. with State and other agencies).

Animal Husbandry Experiment Farm, Beltsville, Md. (beef and dual purpose cattle, swine, sheep, goat, poultry, horse, meat, milk, and animal fiber inv.).

B. F. Brandon, B. S. A., An Husb., in charge.

T. D. John, Sci. Aid.

Note.-Workers assigned to Beltsville are listed under various sections.

#### Field Stations.

Arizona-Glendale (Southwest Poultry Exp. Sta.):

B. W. Heywang, B. S. A., Assoc. Poultry Husb., in charge.

R. B. Morgan, B. S., Jr. Poultry Husb. Florida-Gainesville (beef cattle inv. in coop. with Fla. Exp. Sta.):

W. J. Sheely, B. S., Agt. in An. Husb. (coop.).

#### Georgia:

Athens (beef cattle inv. in coop. with Ga. State College of Agr.)-

W. F. Ward, B. S., M. S., Agt. in An. Husb. (coop.).

J. L. Anderson, B. S. A., Agt. in An. Husb. (coop.).

A. W. Simpson, Jr., B. S. A., Agt. in An. Husb. (coop.).

Experiment (beef cattle inv. in coop. with Ga. Exp. Sta.) -

Z. A. Massey, B. S. A., Agt. in An. Husb. (coop.).

Tifton (beef cattle inv. in coop. with Bu. of Pl. Ind. and Ga. Coastal Plain Exp. Sta.)-

J. L. Stephens, B. S., Forage Crop Spec., Ga. Coastal Plain Exp. Sta., in charge.

Field Stations-Continued.

Idaho-Dubois (U. S. Sheep Exp. Sta.): J. M. Cooper, B. S., Assoc. An. Husb., in charge.

John A. Stoehr, B. S., Asst. An. Husb. K. P. Pickrell, B. S. A., Agt. in An. Husb. (Range Sheep Inv. in coop. with B. A. E. and State Exp. Stations).

Indiana-Bedford and Wanatah (beef and milk production in cattle):

H. J. Reed, B. S. Iowa-College Station:

R. W. Snyder, B. S., M. S., Agt. in An. Husb. (coop.).

#### Louisiana:

Baton Rouge (beef cattle inv. in coop. with La. A. & M. College)-

W. T. Cobb, B. S., Agt. in An. Husb. (coop.).

Jeanerette (Iberia Livestock Expt. Farm; beef cattle, pasture, forage crop, swine, and mule inv., in coop. with B. P. I., B. Ag. Eng., and La. Exp. Sta.)-

W. R. Dodson, B. S., A. B., Agt. in An. Husb., in charge.

J. B. Thompson, B. S., Agron.

Note.-Workers in dairying, pasture and forage crop production, and agricultural engineering are listed under their respective bureaus.

Minnesota-Waseca (beef and milk production in cattle):

R. E. Hodgson, B. S., Supt. in coop. with Minn. Agr. Exp. Sta.).

#### Mississippi:

A. and M. College (beef cattle inv. in coop. with Miss. Agr. Exp. Sta.)-H. H. Leveck, B. S., M. S., Agt. in An. Husb. (coop.).

McNeill (Coastal Plain Exp. Sta.; beef cattle, swine, and sheep inv., in ccop. with Miss. Exp. Sta.) --

S. W. Greene, B. S. A., M. S., Assoc. An. Husb. (Coop.), in charge.

H. I. Harris, B. S. A., Agt. in An. Husb. (coop.).

Starkville (beef cattle and pasture inv. in coop. with Bur. of Pl. Ind. and Miss. Exp. Sta.):

J. R. Ricks, M. S., Agt. in An. Husb.

## Missouri:

Columbia (swine inv., in coop. with Mo. Exp. Sta.)-

F. F. McKenzie, B. S., M. A., Ph. D., Agt. in An. Husb. (Coop.), in charge.

J. E. Comfort, B. S., M. A., Agt. in An. Husb. (coop.).

Grain Valley (beef and dual purpose cattle and pasture inv., in coop. with B. P. I. and Mo. Exp. Sta.)-M. W. Hazen, M. S., Jr. An. Husb. Field Stations-Continued.

Missouri-Continued.

Independence (Andrew Drumm Institute, Inc.)—

H. P. Nelson, B. S. (beef and milk production in cattle in coop. with Mo. Exp. Sta.).

Montana:

Havre (beef cattle inv., in coop. with Mont. Exp. Sta.)—

George W. Morgan, B. S., Assoc. Agron. (Bur. of Pl. Ind.), in charge.

C. Barton Bergstedt, Agt. in An. Husb.

Huntley (swine inv., in coop. with Mont. Exp. Sta.)—

Daniel Hansen, Assoc. Agron. (Bur. of Pl. Ind.), in charge.

Miles City (U. S. Range Livestock Exp. Sta.; beef and dual purpose cattle, sheep, swine, horse, range, and poultry inv., in coop. with Mont. Exp. Sta.)—

J. R. Quesenberry, B. S. A., M. S., Sr. An. Husb., in charge.

A. L. Baker, B. S., Asst. An. Husb. R. E. Hutton, B. S. A., Asst. An. Husb.

S. L. Smith, B. S., Asst. An. Husb.
E. B. Osborn, M. S., Jr. An. Husb.
S. J. Marsden, B. S., Assoc. Poultry Husb.

North Carolina:

Raleigh (beef cattle inv. in coop. with N. C. State College of Agr.—

E. H. Hostetler, B. S. A., M. S., Agt. in An. Husb.

L. I. Case, M. S., Agt. in An. Husb. Wenona (beef cattle inv. at Blackland Branch Sta. in coop. with N. C. Exp. Sta.)—

J. L. Rea, B. S., Agt. in An. Husb., in charge.

A. P. LeFever, Agt. in An. Husb. North Dakota:

Edgeley (beef and milk production in cattle)—

O. A. Thompson, B. S., Supt. (in coop. with N. Dak. Exp. Sta.)

Watford City (beef cattle inv. in coop. with Exp. Stations in Northern Great Plains Area)—

M. B. Johnson, Agt. in An. Husb. (Coop.) in charge.

South Carolina:

Columbia (beef cattle inv. in coop. with Clemson Agr. College)—

J. R. Hawkins, M. S., Agt. in An. Husb).

Summerville (beef cattle inv. at the Coast Exp. Sta. in coop. with S. C. Exp. Sta.)—

T. M. Clyburn, B. S., Agt. in An. Husb.

Field Stations-Continued.

South Dakota:

Ardmore (beef cattle, range, and swine inv.)—

Oscar R. Mathews, B. S., M. S., Assoc. Agron. (Bur. of Pl. Ind.), in charge.

Newell (Belle Fourche Exp. Farm; Swine and sheep inv.)—

Beyer Aune, M. S., Assoc. Agron. (Bur. of Pl. Ind.), in charge.

Texas:

Beeville (beef cattle inv. in coop. with Texas Exp. Sta.)—

R. A. Hall, B. S., in charge.

Big Spring (beef cattle inv. in coop.
with Bur. of Pl. Ind. and Texas
Exp. Sta.)—

Fred E. Keating, B. S., Assoc. Agron. (Bur. of Pl. Ind.), in charge.

College Station (beef cattle and meating, in coop. with Texas A. & M. College and Texas Exp. Sta.)—

J. H. Jones, B. S., Agt. in An. Husb. (coop.).

R. W. Snyder, M. S., Agt. in An. Husb. (coop.).

W. R. Nisbet, B. S., Agt. in An. Husb. (Ranch Org. & Mgnt. in coop. with B. A. E., Texas A. & M. College, and Texas Exp. Sta.).

Vermont—Middlebury (Morgan Horse Farm; horse, sheep, beef and dual purpose cattle, and pasture inv.):

E. B. Krantz, B. S. A., M. S., Assoc. An. Husb., in charge.

J. O. Grandstaff, B. S., Jr. An. Fiber Technol.

West Virginia—Lewisburg (beef cattle inv., in coop. with W. Va. Exp. Sta.):

R. H. Tuckwiller, B. S., Agt. in An. Husb., in charge.

Wyoming—Encampment (range livestock inv., in coop. with Bur. of Agr. Econ., Colo. Exp. Sta., and Wyo. Exp. Sta.):

M. Reinholt, Agt. in An. Husb. (coop.), in charge.

## BIOCHEMIC DIVISION

M. Dorset, B. S., M. D., D. V. M., Prin. Biochem., Chief.

James A. Emery, M. D., Sr. Biochem., Asst. Chief.

Chemical Investigations Dips and Disinfectants.
Robert M. Chapin, B. A., Sr. Biochem.
Percy W. LeDuc, A. B., Assoc. Chem.

Investigations of Hog Cholera (Washington, D. C.).

Chief of Division in charge.

Frank W. Tilley, A. B., M. D., Sr. Bact. Angus D. MacDonald, D. V. M., Asst. Vet. Investigations of Hog Cholera (Washington, D. C.)—Continued.

FIELD HEADQUARTERS.

Iowa-Ames:

Charles N. McBryde, M. S., M. D., Ph. D., Bact. in charge.

C. G. Cole, D. V. M., Jr. Vet.

Chemical Investigations Toxins and Antitoxins.
Robert R. Henley, M. S., Sr. Biochem.
Percy W. LeDuc, A. B., Assoc. Chem.

Angus D. MacDonald, D. V. M., Asst.

Meat Inspection Research.

A. Value of different tissues for food.
Ralph Hoagland, B. Agr., Sr. Biochem.
G. G. Snider, A. B., Sr. Sci. Aid.

B. Rancidity—Biological Methods for Identifying Meats.

Wilmer C. Powick, B. S., Sr. Biochem. Joseph W. Etheridge, D. V. M., Jr. Vet.

Investigation of Relation Between Chemical Structure and Parasiticidal Power (In coop. with Zoological Div.).

Jacob M. Schaffer, M. S., Chem.

Chemical and Bacteriological Investigations of Antigens (In coop. with Path. Div.).

Jacob M. Schaffer, M. S., Chem.

Angus D. MacDonald, D. V. M., Asst. Vet.

Bacteriological Investigations Disinfectants. Frank W. Tilley, A. B., M. D., Sr. Bact.

Preparation and Distribution Tuberculin and

Percy W. LeDuc, A. B., Assoc. Chem. Albert M. West, B. S., Asst. Bact. Angus D. MacDonald, D. V. M., Asst. Vet. Joseph W. Etheridge, D. V. M., Jr. Vet. Oscar H. Griffith, Under Sci. Helper.

## FIELD INSPECTION DIVISION

G. W. Pope, D. V. S., Prin. Vet., Chief.
W. P. Ellenberger, D. V. S., Sr. Vet., Asst. Chief.

## International Inspection and Quarantine.

California:

Calexico-

J. C. Pace, D. V. S., Jr. Vet., Insp. in charge.

Los Angeles-

E. D. Kennedy, D. V. S., Vet., Insp. in charge.

San Diego-

Jens Madsen, M. D., D. V. M., Assoc. Vet., Insp. in charge.

San Francisco-

H. H. Hicks, M. D. V., Assoc. Vet., Insp. in charge.

England-London:

R. W. Tuck, D. V. S., Sr. Vet., Insp. in charge.

Louisiana-New Orleans:

G. T. Cole, V. M. D., Assoc. Vet., Insp. in charge.

International Inspection and Quarantine—Con.
Maine:

Calais-

R. D. Hyde, D. V. M., Asst. Vet., Insp. in charge.

Houlton-

I. H. Kaufman, D. V. M., Asst. Vet., Insp. in charge.

Maryland-Baltimore:

R. W. Culbert, M. D. V., Sr. Vet., Insp. in charge.

Massachusetts-Boston:

A. F. Staub, D. V. M., Sr. Vet., Insp. in charge.

Michigan:

Detroit-

R. F. Vermilya, D. M. C., Vet., Insp. in charge.

Port Huron-

C. H. Canfield, D. V. M., Asst. Vet., Insp. in charge.

Montana-Helena:

J. W. Murdoch, D. V. S., Assoc. Vet., Insp. in charge.

G. H. Ehlers, D. V. M., Asst. Vet.

E. J. Drake, D. V. S., Asst. Vet.

New Jersey-Clifton:

James Fleming, V. S., M. D., Sr. Vet., Insp. in charge.

New York:

Albany-

E. P. Barnhart, D. V. M., Assoc. Vet., Insp. in charge.

Buffalo-

B. P. Wende, V. S., Sr. Vet., Insp. in charge.

C. R. Perkins, D. V. M., Asst. Vet. New York-

James Fleming, V. S., M. D., Sr. Vet., Insp. in charge.

Insp. in charge. Wm. R. Rosekrans, D. V. S., Asst.

Vet.

Ogdensburg-

C. O. Benson, D. V. S., Asst. Vet., Insp. in charge.

Rouses Point-

D. G. Shumway, V. M. D., Asst. Vet., Insp. in charge.

Watertown-

L. N. Dodge, D. V. M., Jr. Vet., Insp. in charge.

North Dakota-Bismarck:

H. H. Cohenour, M. D. V., Assoc. Vet., Insp. in charge.

Augustus Berdan, D. V. S., Asst. Vet. Irvin Myers, D. V. M., Asst. Vet.

Oregon-Portland:

P. P. Taylor, D. V. M., Assoc. Vet., Insp. in charge.

Pennsylvania-Philadelphia:

Thomas Castor, V. M. D., Assoc. Vet., Insp. in charge.

Porto Rico-San Juan:

Juan Veras Catala, V. S., Vet., Insp. in charge.

International Inspection and Quarantine—Con.
Texas:

El Paso-

H. R. Collins, D. V. S., Assoc. Vet., Insp. in charge.

J. C. Reid, D. V. S., Asst. Vet.

H. L. Box, D. V. S., Asst. Vet.

Houston-

C. F. Palmer, V. S., Assoc. Vet., Insp. in charge.

San Antonio-

Wm. Thompson, M. D. C., Assoc. Vet., Insp. in charge.

N. E. Dutro, D. V. S., Asst. Vet. W. E. Turner, D. V. M., Asst. Vet.

Vermont:

Newport-

J. E. Spindler, D. V. M., Asst. Vet., Insp. in charge.

St. Albans-

H. M. Smith, M. D. V., Asst. Vet., Insp. in charge.

Washington:

Seattle-

C. L. Norris, D. V. S., Assoc. Vet., Insp. in charge.

Spokane-

J. R. Aufente, D. V. S., Assoc. Vet., Insp. in charge.

Scabies and Dourine Eradication.

California-Sacramento:

W. E. Howe, V. S., D. V. M., Assoc. Vet., Insp. in charge.

C. R. Behler, M. D. C., Asst. Vet.

C. J. Cook, D. V. M., Asst. Vet.

Chas. Pearson, D. V. S., Asst. Vet.

D. E. Settle, D. V. S., Asst. Vet.

A. E. Wardlow, D. V. M., Asst. Vet. Colorado—Denver:

Rudolph Snyder, M. D. C., Vet., Insp. in charge.

C. E. Burkholder, D. V. S., Asst. Vet.

L. B. Dunlap, D. V. M., Asst. Vet.

E. A. Meyer, D. V. S., Asst. Vet.

C. C. Rubenstein, D. V. M., Asst. Vet.

G. R. Teeple, V. S., Asst. Vet.

Kansas-Topeka:

N. L. Townsend, V. M. D., Assoc. Vet., Insp. in charge.

P. I. Kershner, D. V. S., Asst. Vet. Chas. Webster, D. V. M., Asst. Vet.

Kentucky-Frankfort:

W. F. Biles, D. V. M., Assoc. Vet., Insp. in charge.

Warren Sorrell, D. V. S., Asst. Vet.

Louisiana-Baton Rouge:

S. H. Still, D. V. S., Assoc. Vet., Insp. in charge.

Montana-Helena:

J. W. Murdoch, D. V. S., Assoc. Vet., Insp. in charge.

W. E. Logan, D. V. M., Asst. Vet.

J. H. Shoemaker, D. V. M., Asst. Vet.

Scabies and Dourine Eradication—Continued. Nebraska—Lincoln:

A. H. Francis, D. V. M., Assoc. Vet., Insp. in charge.

G. A. Bostrom, D. V. M., B. S., Ph. G., Jr. Vet.

 W. A. Montgomery, D. V. M., Asst. Vet.
 J. M. Simpson, M. D. V., V. S., Asst. Vet.

Nevada-Reno:

L. C. Butterfield, M. D. C., Assoc. Vet., Insp. in charge.

Clifton Carter, D. V. S., A. B., Asst. Vet.

R. A. Given, D. V. M., Asst. Vet. Eugene Hoover, D. V. M., Asst. Vet.

New Mexico-Albuquerque:

F. L. Schneider, B. S., D. V. S., Sr. Vet., Insp. in charge.

T. W. Crump, D. V. S., Asst. Vet.

C. A. Curtis, D. V. S., Asst. Vet.

J. L. Flanigan, D. V. M., Asst. Vet.

M. A. Harp, D. V. M., Asst. Vet.

E. P. Johnson, M. D. V., Asst. Vet.

H. E. Kemper, D. V. M., Asst. Vet.W. A. Savage, M. D. C., Asst. Vet.

S. W. Wiest, D. V. M., Asst. Vet.

North Dakota-Bismarck:

H. H. Cohenour, M. D. V., Assoc. Vet., Insp. in charge.

Oklahoma-Oklahoma City:

L. J. Allen, V. S., Sr. Vet., Insp. in charge.

W. F. Dunaway, D. V. S., Asst. Vet.

South Dakota-Pierre:

J. O. Wilson, D. V. M., Assoc. Vet., Insp. in charge.

G. W. Cronen, D. V. M., Asst. Vet.

C. C. Heacock, V. S., Asst. Vet.

Texas-Fort Worth:

H. L. Darby, D. V. S., Sr. Vet., Insp. in charge.

W. A. Curtis, D. V. S., Asst. Vet.

P. M. James, D. V. M., Asst. Vet.

J. G. Porter, V. M. D., Asst. Vet.

Utah-Salt Lake City:

F. E. Murray, D. V. M., Assoc. Vet., Insp. in charge.

W. T. Huffman, M. D. V., Asst. Vet.R. W. McGinnis, D. V. M., Asst. Vet.

Washington-Olympia:

J. C. Exline, M. D. V., Assoc. Vet., Insp. in charge.

G. E. Abrams, D. V. S., Asst. Vet.

G. T. Casper, M. D. V., Asst. Vet.

R. A. Parsons, D. V. M., Asst. Vet.

Wyoming—Cheyenne:

John T. Dallas, B. S. A., D. V. M., Assoc. Vet., Insp. in charge.

A. J. Burley, D. V. M., Asst. Vet.

L. S. Smith, D. V. M., Asst. Vet.

S. E. Springer, V. S., Asst. Vet.

#### DIVISION OF HOG-CHOLERA CONTROL

Directed by Assoc. Chief of Bur.

T. P. White, D. V. S., Sr. Vet., Asst. Chief. FIELD STATIONS (work conducted in coop. with State authorities).

Alabama-Birmingham:

R. E. Jackson, V. S., Assoc. Vet., Insp. in charge.

J. W. Venable, D. V. M., Asst. Vet. California-Sacramento:

W. E. Howe, V. S., D. V. M., Assoc. Vet., Insp. in charge.

C. R. Behler, M. D. C., Asst. Vet.

Colorado-Denver :

Rudolph Snyder, M. D. C., Vet., Insp. in charge.

E. N. Stout, D. V. S., Asst. Vet.

Florida-Jacksonville:

T. W. Cole, D. V. M., Vet., Insp. in charge.

H. W. Willis, D. V. M., Asst. Vet.

Georgia-Atlanta:

A. L. Hirleman, D. V. M., Assoc. Vet., Insp. in charge.

Harry Trumbo, D. V. M., Asst. Vet. Idaho-Boise:

W. A. Sullivan, M. D. V., Assoc. Vet., Insp. in charge.

Illinois-Springfield:

James McDonald, D. V. M., Assoc. Vet., Insp. in charge.

I. N. Habecker, M. D. V., Asst. Vet. J. H. Murphy, D. V. M., Asst. Vet.

Indiana-Indianapolis:

J. E. Gibson, V. S., Sr. Vet., Insp. in charge.

N. Wickwire, B. S., D. V. M., D. V. S., Asst. Vet.

H. C. Wilson, D. V. S., Asst. Vet. Iowa-Des Moines:

J. A. Barger, D. V. S., Sr. Vet., Insp. in charge.

R. M. Hofferd, D. V. M., Jr. Vet. J. O. F. Price, D. V. S., Asst. Vet.

T. A. Shipley, D. V. S., Asst. Vct. Kansas-Topeka:

N. L. Townsend, V. M. D., Assoc. Vet., Insp. in charge.

W. I. Bowersox, D. V. M., Asst. Vet. E. C. Cannon,1 D. V. S., LL. B., Asst. Vet.

W. A. Decker, D. V. M., Asst. Vet.

F. B. Jones, D. V. S., Asst. Vet.

R. C. Patterson, D. V. M., Jr. Vet.

L. C. Songer, D. V. S., Asst. Vet. Kentucky-Frankfort:

W. F. Biles, D. V. M., Assoc. Vet., Insp. in charge.

Ocie Carter, D. V. M., Asst. Vet. R. D. Green, D. V. M., Asst. Vet.

1 Devotes part time to hog-cholera control work.

FIELD STATIONS-Continued.

Louisiana-Baton Rouge:

S. H. Still, D. V. S., Assoc. Vet., Insp. in charge.

E. B. Shaw, V. S., M. D. V., Asst. Vet.

Maryland-College Park:

Mark Welch, D. V. M., Acting Insp. in charge.

O. K. Hoffman, D. V. M., Asst. Vet. E. J. McLaughlin, D. V. M., Asst. Vet. Michigan-Lansing:

T. S. Rich, V. S., Sr. Vet., Insp. in charge.

John Keppel, D. V. M., Asst. Vet. W. J. Madell, D. V. M., Asst. Vet.

Mississippi-Jackson:

Hartwell Robbins, D. V. S., Vet., Insp. in charge.

P. H. Mommsen, D. V. M., Asst. Vet. Missouri-Jefferson City:

Ralph Graham, D. V. M., Assoc. Vet. (coop.), Insp. in charge.

S. G. Dreppard, D. V. M., Asst. Vet.

Montana-Helena: J. W. Murdoch, D. V. S., Assoc. Vet., Insp. in charge.

Nebraska-Lincoln :

A. H. Francis, D. V. M., Assoc. Vet., Insp. in charge,

C. H. Hays, D. V. M., Asst. Vet. J. E. Peterman, D. V. M., Asst. Vet.

D. M. Purdy, 1 B. S. A., D. V. M., Asst. Vet.

J. M. Simpson, M. D. V., V. S., Asst. Vet.

North Carolina-Raleigh:

W. C. Dendinger, D. V. M., Assoc. Vet., Insp. in charge.

A. A. Husman, D. V. M., Asst. Vet. Ohio-Columbus:

A. J. DeFosset, D. V. M., Sr. Vet., Insp. in charge.

A. P. Abbott, M. D. V., Asst. Vet.

J. B. Hollenbeck, V. S., M. D. C., Asst.  $V\epsilon t$ .

Oklahoma-Oklahoma City:

L. J. Allen, V. S., Sr. Vet., Insp. in charge.

C. H. Fauks, M. D. V., Asst. Vet.

R. T. Fisher, D. V. S., Asst. Vet. South Carolina-Columbia:

W. K. Lewis, V. S., M. D. V., Sr. Vet. (coop.), Insp. in charge.

E. E. Lent, D. V. M., Asst. Vet.

South Dakota-Pierre:

J. O. Wilson, D. V. M., Assoc. Vet., Insp. in charge.

C. F. Harrington, M. D. C., Asst. Vet. Tennessee-Nashville:

H. L. Fry, D. V. M., Assoc. Vet., Insp. in charge.

J. P. O'Connor, D. V. S., Asst. Vet.

<sup>1</sup> Devotes part time to hog-cholera control work.

Texas-Ft. Worth:

H. L. Darby, D. V. S., Sr. Vet., Insp. in charge.

F. D. Porter, V. M. D., Asst. Vet.

Utah-Salt Lake City:

F. E. Murray, D. V. M., Assoc. Vet., Insp. in charge.

Virginia-Richmond:

R. E. Brookbank, D. V. S., Assoc. Vct., Insp. in charge.

T. M. Owen, D. V. S., Asst. Vet.

Washington-Olympia:

J. C. Exline, M. D. V., Assoc. Vet., Insp. in charge.

F. W. Beckman, D. V. M., Asst. Vet.

G. T. Casper, M. D. V., Asst. Vet.

L. C. Henderson, D. V. S., Asst. Vet. R. A. Parsons, D. V. M., Asst. Vet.

West Virginia-Charleston:

H. M. Newton, D. V. M., Assoc. Vet. (coop.), Insp. in charge.

Wisconsin-Madison:

J. S. Healy, M. D. V., Sr. Vet., Insp. in charge.

H. D. Larzelere, D. V. M., Asst. Vet.

## MEAT INSPECTION DIVISION

R. P. Steddom, V. S., Prin. Vet., Chief.

A. J. Pistor, D. V. S., Sr. Vet., Asst. Chief.
 E. C. Joss, B. S., M. D. C., Sr. Vet., Asst.

W. H. Smith, jr., V. M. D., Sr. Vet., in charge of special work.

F. W. Meyst, D. V. S., Sr. Vet., in charge of Label Section.

G. H. Shaw, C. E., Sr. Archt. Engr.

R. H. Kerr, B. S., Sr. Chem., in charge of Meat Insp. Labs.

G. H. Parks, Assoc. Sanitary Engr.

L. T. Hopkins, D. V. M., Assoc. Vet.

H. R. McMillin, B. S., Assoc. Chem.

R. M. Mehurin, B. S., Assoc. Chem.

J. M. McCoy, B. S., Jr. Chem.

FIELD STATIONS.

Alabama:

Birmingham-

R. H. Nutt, D. V. M., Assoc. Vet., Insp. in charge.

Montgomery-

H. Singleton, D. V. S., Asst. Vet., Insp. in charge.

Tuscaloosa-

C. H. Horcher, D. V. M., Asst. Vet., Insp. in charge.

Arizona:

Phoenix-

S. V. Ewers, D. V. S., Asst. Vet., Insp. in charge.

J. E. Dwyer, D. V. M., Asst. Vet.

Arkansas:

Fort Smith-

W. B. Nichols, Prin. Lay Insp., in charge.

FIELD STATIONS-Continued.

California:

Los Angeles-

E. D. Kennedy, D. V. S., Vet., Insp. in charge.

H. A. Allen, D. V. M., Jr. Vet.

R. N. Ashley, D. V. M., Asst. Vet.

J. E. Bard, D. V. S., Asst. Vet.

A. J. Farley, D. V. M., Asst. Vet.S. M. Fields, M. D. C., Asst. Vet.

G. E. Golden, M. D. V., Asst. Vet.

C. F. Kellogg, D. V. S., Asst. Vet.

A. R. Koen, D. V. S., Asst. Vet.

R. A. McFarland, D. V. M., Asst. Vet. San Diego-

J. Madsen, M. D., D. V. M., Assoc. Vet., Insp. in charge.

H. O. Mantor, D. V. M., Asst. Vet.

C. A. Milner, D. V. S., Asst. Vet.

San Francisco-

H. H. Hicks, M. D. V., Assoc. Vet., Insp. in charge.

I. J. Anderson, D. V. M., Asst. Vet.

L. Bilikam, D. V. M., Asst. Vet. P. J. Cass, M. D. V., Asst. Vet.

J. H. Hogan, D. V. M., Jr. Vet.

F. Hurlbut, D. V. M., Asst. Vet.

S. R. Parker, V. M. D., Jr. Vet. R. S. Shannon, D. V. M., Jr. Vet.

A. E. Graham, Ph. B., Assoc. Lab. Insp., in charge of Lab.

W. C. Owens, A. B., Asst. Chemist. Colorado:

Denver-

J. E. Shelton, D. V. S., Assoc. Vet., Insp. in charge.

G. W. Bromell, M. D., D. V. S., D. C., Asst. Vet.

C. M. Chase, D. V. M., Asst. Vet.

C. L. Davis, D. V. M., Asst. Vet.

W. D. Fountain, D. V. M., Asst. Vet. R. B. Leeper, D. V. S., Asst. Vet,

S. R. Nichols, D. V. M., Asst. Vet. W. Pierret, D. V. M., Asst. Vet.

H. L. Shorten, D. V. S., Asst. Vet.

Pueblo-

A. E. Evans, M. D. C., Assoc. Vet., Insp. in charge.

F. W. Blamey, D. V. M., Asst. Vet. Connecticut:

Bridgeport-

James E. Standing, Prin. Lay Insp., in charge.

Hartford-

Edward Smith, Prin. Lay Insp., in charge.

New Haven-

S. A. Selby, D. V. S., Asst. Vet., Insp. in charge.

R. A. Moonan, D. V. M., Asst. Vet. Delaware:

Wilmington-

C. S. Rockwell, V. M. D., Assoc. Vet., Insp. in charge. C. A. Schuler, D. V. M., Asst. Vet.

FIELD STATIONS-Continued. District of Columbia:

Washington-

A. R. Smith, V. M. D., Assoc. Vet., Insp. in charge.

F. E. Davis, D. V. S., Asst. Vet. I. W. Eichelberger, B. E., D. V. M.,

Asst. Vet.

R. K. Miller, D. V. S., Asst. Vet. A. F. Paul, jr., D. V. M., Asst. Vet. Florida:

Jacksonville-

E. F. Haven, D. V. S., Asst. Vet., Insp. in charge.

F. W. Beck, V. M. D., Asst. Vet.

O. Hinton, V. S., B. V. S., Jr. Vet. Georgia:

#### Atlanta-

W. H. Meadors, D. V. S., Assoc. Vet., Insp. in charge.

R. Avant, D. V. M., LL. B., Asst.

D. W. Coppinger, D. V. M., Jr. Vet. S. H. Exley, D. V. M., Jr. Vet.

Augusta-

J. E. Lovejoy, D. V. S., Assoc. Vet., Insp. in charge.

J. R. Farr, D. V. M., Jr. Vet.
C. S. Lemon, D. V. S., Asst. Vet.

Moultrie-

G. R. Hartman, D. V. S., Asst. Vet., Insp. in charge.

S. D. Hobbs, D. V. M., Asst. Vet.

Honolulu-

M. Brodner, D. V. S., Vet., Insp. in

A. S. Martin, D. V. M., Assoc. Vet. Idaho:

A. J. Creely, D. V. M., Asst. Vet., Insp. in charge.

W. E. Neary, D. V. M., Asst. Vet.

Lewiston-

C. A. Johnston, D. V. S., Assoc. Vet., Insp. in charge.

I. L. Nebeker, D. V. M., Jr. Vet.

Moscow-

Ivan L. Barstow, D. V. M., Asst. Vet., Insp. in charge.

Sandpoint-

W. R. McCall, D. V. M., Asst. Vet., Insp. in charge.

Illinois:

Chicago-

Herman Busman, V. S., M. D., Sr. Vet., Insp. in charge and Trav. Vet. Insp.

E. Himsel, D. V. M., Assoc. Vet., Asst. Insp. in charge.

H. H. Horn, D. V. M., Asst. Vet., Supvr.

J. W. Hovorka, D. V. M., Asst. Vet.,

C. M. Lombard, D. V. M., Asst. Vet., Supvr.

FIELD STATIONS-Continued.

Illinois-Continued.

Chicago-Continued.

A. J. Noonan, M. D. V., Asst. Vet .. Supvr.

W. E. Spierling, D. V. M., Asst. Vet., Supvr.

G. A. Ahrens, D. V. M., Asst. Vel.

O. Aldrich, D. V. M., Asst. Vet. G. L. Allen, D. V. M., Jr. Vet.

W. W. Barlow, D. V. M., B. S. A., Asst. Vet.

F. L. Bartlett, D. V. M., Jr. Vet. D. A. Benson, D. V. M., Jr. Vet.

R. C. Bissell, D. V. M., Jr. Vet.

M. Borsos, D. V. M., Asst. Vet.

C. P. Branigan, M. D. C., Asst. Vet. B. H. Branson, D. V. M., Jr. Vet.

S. A. Burnam, D. V. M., Jr. Vet.

J. L. Campbell, D. V. M., Asst. Vet. G. D. Chandler, D. V. M., Jr. Vet.

R. C. Chatman, D. V. M., Asst. Vet. J. L. Clevenger, D. V. M., Jr. Vet.

M. L. Cravens, D. V. M., Jr. Vet.

R. H. Crowell, D. V. M., Jr. Vet. G. R. Curtis, D. V. M., Asst. Vet.

W. H. Davenport, D. V. M., Asst. Vet.

W. A. Davidson, D. V. S., Asst. Vet. C. H. Deisel, D. V. M., Asst. Vet.

D. F. Eggers, M. D. V., Asst. Vet.

H. J. Fickensher, D. C. M., Asst. Vet. D. J. Flanagan, M. D. V., Asst. Vet.

R. J. Flanagan, D. V. M., Asst. Vet. W. A. German, D. V. M., B. S., Jr.

Vet. G. G. Gregory, D. V. M., Asst. Vet.

G. V. Grewell, D. V. M., Jr. Vet.

M. Hattery, M. D. V., Asst. Vet.

L. W. Head, M. D. C., Asst. Vet. E. H. Ingold, D. V. M., Jr. Vet. E. M. Johnson, D. V. M., B. S., Asst.

Vet. A. G. Johnstone, D. V. M., Asst. Vet.

F. O. Kieldsen, D. V. M., Jr. Vet. H. L. Kilhoffer, D. V. M., Jr. Vet.

O. W. Kirby, D. V. M., Jr. Vet.

R. Kolo, D. V. M., Asst. Vet.

D. A. La Mar, D. V. M., Jr. Vet. H. D. Lasher, D. V. M., Jr. Vet.

G. J. Lengerich, D. V. M., Asst. Vet.

G. M. Lint, D. V. M., Asst. Vet. W. D. Livermore, D. V. M., Asst. Vet.

I. A. Lucas, D. V. M., Asst. Vet. E. E. McDaniel, D. V. M., Jr. Vet.

C. A. Mahl, D. V. M., Jr. Vet.

C. G. Mampreian, D. V. M., Asst. Vet.

F. C. Man, D. V. M., Asst. Vet.

J. J. Merwick, D. V. M., Asst. Vet.

L. Metsker, M. D. C., Asst. Vet. J. A. Molengraft, D. V. M., Asst. Vet.

M. A. Molohon, D. V. M., Jr. Vet. A. D. Moore, D. V. M., Asst. Vet.

G. H. Murphy, D. V. M., Jr. Vet.

FIELD STATIONS-Continued. Illinois-Continued.

Chicago-Continued.

B. J. Nutter, D. V. M., Jr. Vet. E. G. Pigman, D. V. M., Asst. Vet.

G. A. Posse, D. V. M., Asst. Vet. W. R. Pringle, D. V. M., Asst. Vet.

M. B. Purdy, D. V. S., Jr. Vet.

T. E. Quincy, D. V. M., Asst. Vet.

B. E. Robertson, D. V. M., Jr. Vet. R. J. Robertson, D. V. M., Asst. Vet.

B. R. Rogers, D. V. M., Jr. Vet. M. J. Romine, D. V. M., Jr. Vet.

V. W. Routzong, D. V. M., Asst. Vet.

D. J. Ryan, D. V. S., Asst. Vet. W. G. Saunders, V. S., Jr. Vet.

F. E. Schnelle, B. S., D. V. M., Jr. Vet.

J. B. Schorfheide, D. V. M., Asst.

H. H. Shearer, D. V. M., Jr. Vet.

J. T. Shelton, D. V. M., Asst. Vet. F. C. Sigrist, D. V. S., A. B., Asst.

G. M. Smith, D. V. M., Asst. Vet.

W. J. Smith, D. V. M., Jr. Vet.

J. H. Smyth, D. V. M., Jr. Vet.

B. H. Steigleder, D. V. M., Asst. Vet. H. P. Stout, D. V. M., Jr. Vet.

J. A. Sullivan, D. V. M., Asst. Vet.

H. L. Tate, D. V. M., Jr. Vet. B. W. Taylor, D. V. M., Asst. Vet.

L. W. Thiele, D. V. M., Jr. Vet.

M. J. Thomson, D. V. M., Asst. Vet.

D. R. Trueblood, D. V. M., Jr. Vet.

I. Wallman, D. V. M., Asst. Vet.

C. A. Ward, D. V. M., Asst. Vet.
F. Weaver, D. V. M., Asst. Vet.

L. W. West, D. V. M., Jr. Vet.

P. F. West, D. V. M., Asst. Vet.

C. L. Whittington, M. D. C., Jr. Vet. A. N. Wilson, D. V. M., Jr. Vet.

C. F. Wilson, D. V. M., Asst. Vet.

F. E. Wilson, D. V. M., Jr. Vet.

C., E. Windeler, M. D., V. M. D. Asst. Vet.

W. W. Worcester, V. S., Asst. Vet. C. T. N. Marsh, Assoc. Chem., in

charge of Lab. F. B. Hilty, A. B., Asst. Chem.

Robert H. Philbeck, B. S., Jr. Chem. Jacksonville-

J. Robinson, D. V. M., Asst. Vet., Insp. in charge.

National Stock Yards-

C. F. Payne, V. S., Sr. Vet., Insp. in charge and Traveling Vet. Insp.

R. C. Lambert, D. V. M., Asst. Vet., Supvr.

G. H. Starr, D. V. M., Asst. Vet., Supvr.

C. D. Bailey, D. V. M., Jr. Vet. O. E. Jung, D. V. S., Jr. Vet.

G. H. Bruns, D. V. M., Asst. Vet.

T. R. Cairns, D. V. M., Asst. Vet.

C. W. Chapin, D. V. M., Asst. Vet. C. D. Emerick, D. V. M., Asst. Vet. FIELD STATIONS-Continued.

Illinois-Continued.

National Stock Yards-Continued.

C. R. Graham, D. V. M., Asst. Vet. R. Greene, D. V. M., Asst. Vet.

F. D. Halsey, V. S., Asst. Vet.

C. E. Hart, D. V. S., Asst. Vet. R. E. Surring, D. V. M., Asst. Vet.

F. S. Thurman, D. V. M., Asst. Vet. W. S. Trigg, D. V. M., Asst. Vet.

A. C. Walls, D. V. M., Asst. Vet.

R. E. Watson, D. V. M., Jr. Vet.

J. S. Wolfram, D. V. M., Jr. Vet.

A. R. Zumwalt, D. V. M., Asst. Vet. Peoria-

A. N. Hughes, M. D. V., Asst. Vet., Insp. in charge.

S. J. Goldstein, D. V. M., Asst. Vet.

O. U. Poth, D. V. M., Jr. Vet.

Indiana: Anderson-

Charles Corson, D. V. M., Asst. Vet., Insp. in charge.

Evansville-

O. W. Noyes, D. V. S., Assoc. Vet., Insp. in charge.

L. L. Criswell, D. V. M., Asst. Vet. J. W. Harner, D. V. M., Asst. Vet.

C. Upton, D. V. M., Asst. Vet. Fort Wayne-

G. M. Dorman, D. V. M., Asst. Vet., Insp. in charge.

Frankfort-

G. W. Knorr, M. D. C., Asst. Vet., Insp. in charge.

Indianapolis-

O. Hornlein, M. D. V., Vet., Insp. in charge and Trav. Vet. Insp.

F. W. Dennie, D. V. M., Asst. Vet., Supvr.

C. A. Clawson, D. V. M., B. S. A., Asst. Vet.

C. O. Joyce, D. V. M., Asst. Vet.

L. P. Kirch, D. V. M., Asst. Vet. J. E. Lynch, D. V. M., Asst. Vet.

O. C. Mayer, M. D. V., Asst. Vet. W. J. Palmer, D. V. M., Asst. Vet.

J. S. Reno, D. V. M., Asst. Vet.

H. R. Schrumpf, D. V. M., Asst. Vet.

H. Seevers, D. V. M., Asst. Vet.

H. M. Springer, D. V. M., Asst. Vet. R. R. Springer, D. V. M., Asst. Vet.

R. Steinmetz, D. V. M., Asst. Vet. R. Turnbull, V. S., Asst. Vet.

R. C. Vermillion, V. S., D. V. M., Asst. Vet.

R. M. Ward, D. V. M., Asst. Vet. B. H. Yenner, D. V. S., Asst. Vet.

La Fayette-

J. M. Jehle, M. D. C., Asst. Vet., Insp. in charge.

Madison-

R. R. Newman, D. V. S., Asst. Vet., Insp. in charge.

Mishawaka-

C. V. Shaw, D. V. M., Assoc. Vet., Insp. in charge.

Indiana—Continued.

Richmond-

C. O. Wagoner, V. S., Asst. Vet., Insp. in charge.

Terre Haute-

M. L. Crans, D. V. M., Assoc. Vet., Insp. in charge.

B. O. Sherrill, D. V. M., Asst. Vet.

Iowa:

Albia-

Joseph Hannon, M. D. V., Assoc. Vet., Inspr. in charge.

Cedar Rapids-

A. M. Casper, M. D. C., Assoc. Vet., Insp. in charge.

D. G. Cooper, D. V. M., Asst. Vet. G. C. Faun, V. M. D., Asst. Vet.

H. W. Hall, D. V. M., Asst. Vet.

E. F. Kallenberg, D. V. M., Asst. Vet. H. S. Perdue, D. V. M., Asst. Vet. Davenport-

L. H. Allen, M. D. V., Assoc. Vet., Insp. in charge.

F. C. Davis, D. V. M., Jr. Vct.

Des Moines-

C. W. Deming, D. V. M., Asst. Vct., Insp. in charge.

C. D. Lash, D. V. S., Asst. Vet. C. A. Towne, D. V. M., Jr. Vet.

C. E. Williams, D. V. M., Asst. Vet.

H. H. Dell, D. V. S., Asst. Vet., Insp. in charge.

Mason City-

C. E. Mootz, D. V. M., Assoc. Vet., Insp. in charge.

W. J. Brown, D. V. M., Asst. Vet. G. H. Gitz, D. V. M., Jr. Vct.

S. L. Ries, D. V. M., Asst. Vet.

J. B. Snyder, M. D. V., Jr. Vet. R. M. Thomas, D. V. M., Jr. Vet.

Ottumwa-E. S. Dickey, D. V. S., Assoc. Vet., Insp. in charge.

L. D. Belknap, D. V. M., Jr. Vet.

R B. Harper, D. V. S., Asst. Vet.

C. P. McKim, D. V. M., Jr. Vet. F. B. Perdue, D. V. M., Jr. Vet.

F. G. Riedel, D. V. M., Jr. Vet.

C. L. Ury, D. V. M., Jr. Vet.

Sioux City-

A. D. Bullock, D. V. M., Sr. Vet., Insp. in charge.

J. A. Patton, D. V. M., Asst. Vet. Supvr.

Perry Zenor, B. S., M. D. C., Asst. Vet., Supvr.

A. E. Arthaud, D. V. M., Jr. Vet.

A. W. Bennett, D. V. M., Asst. Vet. H. E. Breckerbaumer, D. V. M., Asst. Vet.

E. Combs, D. V. S., Asst. Vet.

W. A. Cornell, D. V. M., Jr. Vet.

A. Decker, D. V. M., Asst. Vet. W. V. Ellis, D. V. M., Asst. Vet,

E. O. Gisel, D. V. M., Asst. Vet.

FIELD STATIONS-Continued. Iowa-Continued.

Sioux City-Continued.

B. L. Gray, D. V. M., Jr. Vet. L. V. Haggerty, D. V. M., Asst. Vet. W. F. Hodam, V. S., Jr. Vet.

J. Kalmansohn, D. V. M., Asst. Vet.

F. J. Lauman, D. V. S., Asst. Vet. H. J. Lawrence, D. V. S., Asst. Vet.

A. H. Legenhausen, D. C. M., Asst. Vet.

J. A. Patton, D. V. M., Asst. Vet.

R. H. Pease, D. V. M., Jr. Vet.

J. R. Pooley, D. V. S., Asst. Vet. J. A. Skordahl, D. V. M., Jr. Vet.

T. W. Stewart, D. V. M., A. B., Asst. Vct.

E. V. Stromlund, D. V. S., Asst. Vet. Waterloo-

H. J. Hoyman, M. D. C., Assoc. Vet., Insp. in charge.

W. L. G. Geick, D. V. M., Asst. Vet. A. L. Blake, D. V. M., Asst. Vet.

C. E. Miller, D. V. M., Jr. Vet.

W. C. Smith, D. V. M., Jr. Vet. R. A. Telford, D. V. M., B. S., Jr. Vet.

#### Kansas:

Arkansas City-

F. E. Haworth, V. M. D., Asst. Vct., Insp. in charge.

Kansas City-

J. S. Jenison, D. V. M., Sr. Vet., Insp. in charge and Traveling Vet. Insn.

B. F. Gooch, D. V. S., Assoc. Vet., Asst. Insp. in charge.

E. M. Berroth, D. V. M., Asst. Vet., Supvr.

G. H. Randall, D. V. S., Asst. Vet., Supvr.

J. B. Thompson, D. V. M., Asst. Vet., Super.

J. R. Barnes, D. V. M., Asst. Vet.

A. C. Barr, D. V. S., Asst. Vet. E. V. Beaumont, D. V. S., Asst. Vet.

D. H. Bibens, D. V. S., Jr. Vet.

A. G. Collins, D. V. S., Asst. Vet.

W. R. Cooper, D. V. S., LL. B., Asst. Vet.

E. N. Davis, D. V. M., Jr. Vet.

B. L. Dawson, D. V. M., Asst. Vet.

J. Dickson, D. C. M., Asst. Vet.
 E. F. Erfurth, D. V. S., Asst. Vet.
 O. A. Erfurth, D. V. S., Asst. Vet.

C. C. Ettling, D. V. S., Asst. Vet.

J. T. Gaston, D. V. S., B. Acct.,

Asst. Vet. W. H. Hannemann, D. V. M., Jr. Vet.

T. T. Hartman, D. V. S., Asst. Vet.

L. J. Howell, D. V. M., Asst. Vet.

H. C. Ingraham, D. V. M., Asst. Vet. F. H. Kirwan, D. V. M., Asst. Vet.

W. A. Kliphardt, D. V. S., Asst. Vet. I. G. McChesney, D. V. M., Asst. Vet. W. L. Martin, D. V. S., Asst. Vet.

G. E. Maxwell, D. V. S., Asst. Vet.

Kansas-Continued.

Kansas City-Continued.

J. M. Mayes, D. V. S., Asst. Vet.

F. P. Miller, D. V. M., Asst. Vet. R. S. Mourning, D. V. M., Asst. Vet.

A. Newberg, D. V. S., Asst. Vet.
 G. C. Newberg, D. V. S., Asst. Vet.
 G. D. Painter, D. V. S., Asst. Vet.
 J. W. Parker, D. V. S., Asst. Vet.

W. E. Patterson, D. V. S., Asst. Vet.

H. C. Reed, D. V. M., LL. B., Jr. Vet.

C. M. Scheloski, D. V. S., Asst. Vet. J. O. Schlegel, D. V. S., Asst. Vet.

F. Spillman, D. V. M., Asst. Vet.

J. W. Taggart, D. V. S., Asst. Vet. J. F. Talbert, M. D. C., Asst. Vet.

B. Tierman, D. V. M., Asst. Vet. D. A. Tyler, D. V. S., Asst. Vet.

E. V. Wedemeyer, D. V. M., Asst. Vet.

R. M. Williams, D. V. M., Asst. Vet.

G. W. Winkler, D. V. M., Asst. Vet. C. H. Wright, D. V. S., Asst. Vet.

H. C. Kershner, Assoc. Lab. Insp., in charge of Lab.

S. Adler, B. S., M. S., Asst. Chem. W. C. McVey, A. B., Jr. Chem.

Leavenworth-

C. B. Henderson, D. V. S., Asst. Vet., Insp. in charge.

Pittsburg-

W. K. Howard, M. D. C., Asst. Vet., Insp. in charge.

Topeka-

O. A. Stingley, B. Sc., D. V. S., Assoc. Vet., Insp. in charge.

H. H. Groat, D. V. M., Jr. Vet. O. B. Huston, D. V. S., Asst. Vet.

C. F. Pinkham, D. V. S., Asst. Vet. Wichita-

E. W. Barthold, M. D. C., Assoc. Vet., Insp. in charge.

C. W. Barnhart, D. V. S., Asst. Vet. E. S. Bacon, D. V. M., Asst. Vet.

F. E. Brown, D. V. M., Jr. Vet.O. Emmitt, D. V. S., Jr. Vet.

L. R. Fauteck, D. V. S., Asst. Vet. W. W. La Fayette, D. V. M., Asst. Vet.

J. D. Melvin, D. V. M., Asst. Vet. G. W. Ornduff, D. V. S., Asst. Vet.

J. F. Pickett, D. V. S., Asst. Vet.

Kentucky:

Henderson-

S. G. Fortune, D. V. M., Assoc. Vet., Insp. in charge.

Louisville-

J. B. Johnson, D. V. M., Assoc. Vet., Insp. in charge.

G. Bard, V. M. D., Asst. Vet.

J. F. Chipman, D. V. M., Asst. Vet.

C. F. Hobbs, D. C. M., Asst. Vet.

F. B. Jones, D. V. S., Asst. Vet. H. H. Myers, V. S., Asst. Vet.

J. B. Way, D. V. M., Asst. Vet.

FIELD STATIONS-Continued.

Louisiana:

New Orleans-

G. T. Cole, V. M. D., Assoc. Vet., Insp. in charge.

E. A. Corbin, M. D. C., Jr. Vet.

S. C. Cook, D. V. M., Asst. Vet. W. M. Haag, D. V. M., Asst. Vet.

C. W. Turrell, D. V. M., Asst. Vet. Shreveport-

Levi Bryant, Prin. Lay Insp., in charge.

Maine:

Auburn-

L. K. Green, V. M. D., Asst. Vet., Insp. in charge.

Houlton-

I. H. Kaufman, D. V. M., Asst. Vet., Insp. in charge.

C. A. Hazzard, D. V. M., Asst. Vet. Portland-

D. D. Callahan, Prin. Lay Insp., in

Maryland:

Baltimore-

R. W. Culbert, M. D. V., Sr. Vet., Insp. in charge and Traveling Vet.

G. S. Jackson, D. V. M., Asst. Vct., Supvr.

R. V. Rafnel, D. V. M., Asst. Vct., Super.

J. P. Beck, M. D. C., V. S., Asst. Vet.

L. J. Cook, D. V. M., Asst. Vet.

R. M. Cory, D. V. S., Asst. Vet.

N. N. Crawford, D. V. M., Jr. Vet.

A. A. Edelin, D. V. M., Asst. Vet. H. Gutschenritter, D. V. M., Jr. Vet.

J. Huebschman, M. D. C., Asst. Vet.

F. D. Owen, D. V. S., Asst. Vet. W. W. Shartle, D. V. M., Asst. Vet.

M. H. Walmer, D. V. S., Asst. Vet. E. P. Yager, D. V. S., Asst. Vet.

Cumberland-

J. C. Shafer, Prin. Lay Insp., in charge.

Frederick-

H. A. Schneider, M. D. V., Asst. Vet., Insp. in charge.

Pocomoke City-

G. C. Pieper, D. V. M., Asst. Vet., Insp. in charge.

Salisbury-

A. T. Ayers, D. V. M., Asst. Vet., Insp. in charge.

Massachusetts:

Boston-

A. F. Staub, D. V. M., Sr. Vet., Insp. in charge and Trav. Vet.

E. N. Tierney, D. C. M., Assoc. Vet., Asst. Insp. in charge.

J. H. Coleman, D. V. M., Jr. Vet.

E. R. Fisher, D. V. M., Jr. Vet.

A. C. Fitzpatrick, M. D. V., Asst. Vet.

FIELD STATIONS—Continued. Massachusetts-Continued.

Boston-Continued.

S. Folse, D. V. S., Asst. Vet. W. L. Grubb, V. S., B. V. Sc., Jr. Vet.

O. L. Kranz, D. V. M., Jr. Vet.

J. C. McLeod, D. V. M., Asst. Vet. M. T. Perry, M. D. V., Assoc. Vet.

H. Q. Thompson, V. S., Asst. Vet.

C. L. Wrinkle, D. V. M., Jr. Vet.

L. E. Merrill, Prin. Lay Insp., in charge.

Springfield-

H. E. Brown, M. D. V., Assoc. Vet., Insp. in charge.

Worcester-

W. L. Hayward, Prin. Lay Insp., in charae.

#### Michigan:

Detroit-

R. F. Vermilya, D. M. C., Vet., Insp. in charge.

E. F. Jameson, D. V. S., Asst. Vet., Supvr.

W. G. Adams, D. V. M., Asst. Vet. H. L. Cotton, D. V. M., Asst. Vet.

L. A. Greiner, jr., D. V. M., Asst. Vet.

H. T. Grossman, D. V. M., Asst. Vet.

A. M. Hoehn, D. V. M., Asst. Vet. D. Marks, D. V. M., Asst. Vet.

M. H. Mendenhall, D. V. M., Asst. Vet.

M. A. Ruck, D. V. M., Asst. Vet.

A. G. Stamp, D. V. M., Asst. Vet. E. W. Stapp, D. V. M., Asst. Vet.

B. H. Swim, D. V. M., Asst. Vet.

G. W. Trubey, D. V. M., Asst. Vet. J. W. Vance, D. V. M., Asst. Vet.

W. R. Van Ness, V. S., M. D. V., Asst. Vet.

Z. Veldhuis, D. V. S., Asst. Vet. J. E. Zeltzer, D. V. M., Asst. Vet.

Menominee-

J. L. Myers, D. V. M., Asst. Vet., Insp. in charge.

#### Minnesota:

Albert Lea-

B. C. Johnson, D. V. M., Assoc. Vet., Insp. in charge.

G. M. Carson, D. V. M., Jr. Vet. S. K. Nelson, D. V. M., Asst. Vet. W. G. Reed, D. V. M., Jr. Vet.

Austin-

D. D. Tierney, M. D. V., Assoc. Vet., Insp. in charge.

Ray Hoefling, D. V. M., Asst. Vet.

E. D. Richards, D. V. M., Jr. Vet. C. C. Riedel, M. D. C., Jr. Vet.

F. A. Scott, D. V. M., Asst. Vet. L. W. Stevens, D. V. M., Jr. Vet.

W. L. R. Williamson, D. V. M., Asst. Vet.

FIELD STATIONS-Continued. Minnesota-Continued.

Duluth-

L. E. Epple, V. S., Assoc. Vet., Insp. in charge.

G. R. Tomlinson, V. S., M. D. C., Asst. Vet.

Fergus Falls-

M. L. Davenport, D. V. M., Asst. Vet., Insp. in charge. South St. Paul—

G. E. Totten, M. D. C., Sr. Vet., Insp. in charge and Trav. Vet. Insp.

M. E. Schwab, D. V. M., Ph. D., Asst. Vet., Supvr.

L. V. Hardy, D. V. M., Asst. Vet., Supvr.

O. W. Anderson, D. V. M., Asst. Vet.

F. A. Baldwin, D. V. M., Jr. Vet. C. B. Barber, D. V. M., Jr. Vet.

J. D. Bloemers, D. V. M., Asst. Vet.B. B. Bowen, D. V. M., Jr. Vet.

E. J. Calph, D. V. M., Asst. Vet.

F. W. Crawford, D. V. M., Jr. Vet. C. H. Easterling, D. V. M., Jr. Vet.

A. A. Eddingfield, D. V. S., Jr. Vet.

R. H. Harrison, D. V. S., Asst. Vet. C. H. Hart, M. D. C., Jr. Vet.

W. D. Hoffmaster, D. V. M., Jr. Vet. N. H. Howell, D. V. M., Jr. Vet.

W. A. Jordan, D. V. M., B. S., M. S., Jr. Vet. R. I. Lowenberg, D. V. M., Jr. Vet.

C. H. Mobiley, D. V. M., Jr. Vet. E. N. Moline, D. V. S., Asst. Vet.

J. H. Moore, D. V. M., Asst. Vet.

T. J. Muxlow, D. V. M., Jr. Vet. G. H. Oakes, D. V. M., Jr. Vet.

A. T. Ostendorf, D. V. M., Jr. Vet.

I. Owens, D. V. S., Asst. Vet. R. Pickett, D. V. M., Asst. Vet.

H. L. Prowett, D. V. M., Jr. Vet. C. E. Redden, D. V. M., Asst. Vet.

J. R. Scott, D. V. M., Jr. Vet.

M. R. Sebright, D. V. M., Jr. Vet. J. V. Shannon, D. V. M., Jr. Vet.

H. E. Skoog, B. S., D. V. M., Jr. Vet.

R. J. Spain, D. V. M., Asst. Vet. D. B. Stewart, D. V. M., Asst. Vet.

R. Stigers, D. V. M., Jr. Vet.

S. A. Turpen, D. V. M., Asst. Vet. J. W. Welnhofer, D. V. M., Jr. Vet.

C. V. Williams, D. V. M., Jr. Vet.

V. W. Woolen, D. V. M., Asst. Vet. Winona-

L. A. Wilson, D. V. M., Asst. Vet., Insp. in charge.

H. J. Clary, D. V. M., Jr. Vet. C. F. Barnes, D. V. M., Jr. Vet.

Mississippi:

Natchez-

J. B. Harris, Prin. Lay Insp., in charge.

Vicksburg-

H. H. Culver, Prin. Lay Insp., in charge.

Missouri:

Joplin-

M. W. McGuire, D. V. S., Asst. Vet., Insp. in charge.

St. Louis-

T. B. Pote, D. V. S., M. D., Assoc. Vet., Insp. in charge.

O. E. Barth, M. D. C., Asst. Vet., Supvr.

S. L. Blount, D. V. M., B. S., Asst. Vet.

H. H. Brown, D. V. M., Asst. Vet.

J. J. Evans, jr., D. V. M., Jr. Vet.

R. F. Gard, D. V. S., Asst. Vet.

E. A. Garleb, D. V. M., Asst. Vet.

C. L. Guinn, D. V. M., Jr. Vet.
D. F. McCarthy, D. V. M., Asst. Vet.
L. H. Mead, D. V. M., Asst. Vet.

T. R. Morse, D. V. M., Jr. Vet.

W. R. Scott, D. V. M., Asst. Vet.

C. T. Snyder, D. V. M., Asst. Vet.

H. J. Timmerman, D. V. S., Asst. Vet.

C. H. Swanger, B. S., Assoc. Chem., in charge of Lab. W. B. Fromer, B. S., Asst. Chem.

G. L. McGinty, Asst. Chem.

South St. Joseph-

B. J. Stockler, D. V. M., Vet., Insp. in charge.

J. A. Zimmerman, D. V. S., Asst. Vet., Supvr.

W. A. Barr, V. S., Asst. Vet.

E. J. Cary, D. V. S., Asst. Vet.

W. Craig, D. V. M., Asst. Vet.

W. P. Divelbiss, D. V. M., Asst. Vet.

C. H. Grunwald, D. V. M., Asst. Vet.

C. J. Hayward, D. V. M., Asst. Vet.

W. G. McGuire, D. V. M., Asst. Vet.

G. J. Mutziger, D. V. S., Asst. Vet.

M. D. Nelson, D. V. M., Asst. Vet.

W. J. J. Pooley, D. V. M., Asst. Vet.

J. B. Sigrist, D. V. M., Asst. Vet. L. P. Sullivan, D. V. M., Asst. Vet.

C. C. Walch, D. V. S., Asst. Vet. F. M. Welch, D. V. M., Asst. Vet.

D. C. Wilke, D. V. M., Asst. Vet.

J. B. Wright, D. V. S., Asst. Vet.

West Plains-

J. F. Park, D. V. M., Asst. Vet., Insp. in charge.

## Montana:

Butte-

F. G. Miller, D. V. M., Assoc. Vet., Insp. in charge.

W. R. Sheff, D. V. M., B. S., Jr. Vet. Nebraska:

Nebraska City-

G. A. Kay, D. C. M., Asst. Vet., Insp. in charge.

H. H. Hervey, D. V. M., Asst. Vet.

Frank Jelen, D. V. S., Sr. Vet., Insp. in charge.

E. W. Burke, D. V. M., Asst. Vet., Supvr.

FIELD STATIONS-Continued.

Nebraska-Continued.

Omaha-Continued.

A. N. McGregor, D. V. M., Asst. Vet., Supvr.

W. R. Richards, M. D. C., Asst. Vet., Supvr.

A. P. Abendshien, D. V. M., Jr. Vet. H. M. Batchelder, D. V. M., Jr. Vet.

G. I. Bomgardner, D. V. S., Asst. Vet.

J. A. Carlsen, D. V. M., Asst. Vet.

E. M. Clark, D. V. M., Asst. Vet.

G. Edgecomb, D. V. M., Asst. Vet.

A. English, D. V. M., Asst. Vet.

G. P. Everly, D. V. S., Asst. Vet.
W. C. Finn, D. V. M., Jr. Vet.
G. A. Franz, D. V. M., Asst. Vet.

G. C. Harrington, D. V. M., Asst.

Vet. M. Heusinkveld, D. V. M., Jr. Vet.

F. W. Hock, D. V. M., Asst. Vet.

J. W. Huston, D. V. M., Asst. Vet.

G. J. Jarvis, D. V. M., Asst. Vet.

C. A. Jerome, D. V. S., Asst. Vet.

H. O. Kelpe, D. V. S., Asst. Vet.
M. H. Leininger, D. V. S., Asst. Vet.
C. T. Loy, D. V. M., Jr. Vet.

C. M. McCoy, D. V. M., Asst. Vet.

P. S. McLaughlin, D. V. M., Asst. Vet.

A. M. Meade, D. V. S., Asst. Vet.

W. J. Mulroony, M. D. V., Jr. Vet.

D. C. Murdock, M. D. C., Asst. Vet. C. F. Nord, D. V. S., Jr. Vet.

W. F. Osterholtz, D. V. M., Asst.

V. V. Shattuck, D. V. M., Asst. Vet.

H. E. Smith, D. V. M., Asst. Vet.

D. F. Stouffer, D. V. S., Asst. Vet.

E. A. Boyer, Assoc. Chem., in charge of Lab.

F. P. St. Clair, D. V. M., M. D., Sr. Vet., Traveling Vet. Insp.

## Nevada:

Reno-

L. C. Butterfield, M. D. C., Assoc. Vet., Insp. in charge.

F. C. Swaney, M. D. C., Asst. Vet.

New Hampshire:

Claremont-

G. A. Patterson, Prin. Lay Insp., in charge.

Keene-

T. W. Carnachan, M. R. C. V. S., Asst. Vet., Insp. in charge. Manchester-

W. F. Quigley, Prin. Lay Insp., in charge.

New Jersey:

Jersey City-

E. H. Baumann, D. V. M., Assoc. Vet., Insp. in charge.

H. E. Benge, D. V. M., Jr. Vet.

P. F. Carr, D. V. M., Jr. Vet.

J. Jacobs, D. V. S., Asst. Vet.

W. G. Lashbrook, D. V. M., Jr. Vet.

FIELD STATIONS-Continued. New Jersey-Continued.

Jersey City-Continued.

M. J. Myers, V. S., Asst. Vet.
O. Nelson, V. M. D., Asst. Vet.
A. Packer, D. V. M., Asst. Vet.
E. S. Ring, D. V. S., Asst. Vet.

F. C. Willson, D. V. M., Asst. Vet. Newark-

C. L. Elliott, D. V. M., Assoc. Vet., Insp. in charge.

J. J. Cattanach, D. V. S., Asst. Vet. C. Hedley, D. V. M., Asst. Vet.

C. W. Humphrey, D. V. M., Asst. Vet.

J. J. Martin, D. V. M., Asst. Vet.

J. Maurer, D. V. M., Asst. Vet.

W. F. Osborn, D. V. S., Asst. Vet. F. E. Pinkerton, D. V. M., Asst. Vet.

J. M. Wingate, D. V. M., Jr. Vet. Paterson-

S. A. King, D. V. S., Assoc. Vet., Insp. in charge.

L. E. Barnes, D. V. M., Jr. Vet. F. J. Glynn, D. V. S., Asst. Vet. W. Grimes, D. V. S., Asst. Vet.

New York:

Albany-

E. P. Barnhart, D. V. M., Assoc. Vet., Insp. in charge.

C. R. Quillin, D. V. S., Jr. Vet. C. C. Taylor, D. V. M., Jr. Vet.

Buffalo-

B. P. Wende, V. S., Sr. Vet., Insp. in charge.

E. R. Jackson, D. V. M., Asst. Vet., Supvr.

J. M. Chase, V. S., Asst. Vet.

R. J. Dunlavey, D. V. M., Asst. Vet.
 R. B. Ferro, D. V. M., Jr. Vet.

W. R. Fleming, D. V. S., Asst. Vet. T. J. Foley, D. V. M., Jr. Vet.

F. L. Foster, D. V. M., Asst. Vet.

M. J. Hastings, D. V. M., Asst. Vet. B. A. Hyatt, D. V. M., Asst. Vet.

A. McConnell, D. V. M., Jr. Vet.

J. H. O'Leary, D. V. M., Asst. Vet.

C. R. Perkins, D. V. M., Asst. Vet. B. S. Shattuck, D. V. M., Asst. Vet.

J. Stafford, D. V. S., Asst. Vet.

C. A. Trapkey, D. V. M., Jr. Vet.

A. G. Ward, D. V. M., Jr. Vet.

H. R. Yost, D. V. M., Asst. Vet.

New York-

D. R. Gillies, V. S., M. D., Sr. Vet., Insp. in charge and Traveling Vet.

O. W. Seher, D. V. M., Assoc. Vet., Asst. Insp. in charge.

M. W. Cohen, D. V. M., Asst. Vet., Supvr.

C. G. Haber, D. V. M., Asst. Vet., Supvr.

G. A. Schwamm, D. V. M., Asst. Vet., Supvr.

C. T. Adamson, D. V. M., Jr. Vet.

FIELD STATIONS-Continued.

New York-Continued.

New York-Continued. H. B. Ballou, D. V. M., Asst. Vet.

C. R. Biederman, D. V. S., Asst. Vet H. J. Boyer, D. V. M., Asst. Vet.

D. M. Colby, D. V. M., Jr. Vet.

J. A. Eadie, D. V. S., Asst. Vet. B. J. Eno, D. V. M., B. S., Jr. Vet.

C. Greenhaus, D. V. M., Asst. Vet. A. W. Groth, D. V. M., Jr. Vet.

C. Hassel, D. V. S., Asst. Vet.

M. F. Henry, D. V. S., Asst. Vet. J. R. Houchins, D. V. M., Asst. Vet.

M. Isaac, D. V. S., Asst. Vet.

J. D. Jarman, D. V. M., Jr. Vet. S. H. Johnston, D. V. S., Asst. Vet. I. J. Kahn, D. V. M., Ph. G., Jr. Vet.

A. W. Kay, D. V. S., Asst. Vet. G. A. Kuhn, D. V. M., B. S., Jr. Vet.

C. F. Lipp, D. V. M., Jr. Vet.

A. R. Miller, D. V. M., Jr. Vet. M. J. Murphy, D. V. S., Asst. Vet.

H. S. Nevius, D. V. M., Jr. Vet. J. L. Oyarzaba, D. V. M., Jr. Vet.

M. Paolone, D. V. S., Asst. Vet. L. J. Pate, D. V. M., Jr. Vet.

R. E. Pflugrad, D. V. M., B. S., Jr. Vet.

F. Pinney, M. D. C., Jr. Vet.

A. I. Schmidt, D. V. M., Jr. Vet. D. M. Snow, V. M. D., Jr. Vet.

A. A. Turner, D. V. M., Jr. Vet.

A. J. Wahn, D. V. M., Jr. Vet.

H. L. Winder, D. V. M., Jr. Vet. M. M. Woods, D. V. M., Asst. Vet.

J. M. Young, D. V. S., Asst. Vet. W. F. Schroeder, B. S., Assoc. Chem.,

in charge of Lab. D. Edelman, B. S., Asst. Chem.

C. C. Gouldman, B. S., Jr. Chem.

Pearl River-

F. A. Grenfell, D. V. M., Assoc Vet., Insp. in charge.

North Carolina:

Charlotte-

Jacob Vogel, Prin. Lay Insp., in charge.

Wilmington-

A. H. Carpenter, Prin. Lay Insp., in charge,

North Dakota:

Grand Forks-

J. A. Thompson, D. V. S., B. S., Assoc. Vet., Insp. in charge.

West Fargo-

J. H. Kitzhofer, D. V. S., Assoc. Vet., Insp. in charge.

L. M. Henry, D. V. M., Jr. Vet.

H. D. Osborne, D. V. M., Asst. Vet. H. L. Rae, D. V. M., Asst. Vet.

Ohio:

Athens-

P. J. Huffman, jr., D. V. S., Asst. Vet., Insp. in charge.

Ohio-Continued.

#### Cincinnati-

W. C. Herrold, V. S., Vet. Insp., in charge and Trav. Vet. Insp.

A. E. Montgomery, D. V. M., Asst. Tet. Supvr.

H. W. Butz, D. V. M., Asst. Vet. F. B. Drake, D. V. M., Asst. Vet.

A. B. Elstun, D. V. M., Asst. Vet.

C. A. Engleman, D. V. M., Asst. Vet.

F. G. Hahn, D. V. M., Asst. Vet. A. J. Hauck, D. V. M., Asst. Vet.

J. W. Hermann, D. V. M., Asst. Vet.

A. A. Hiett, D. V. M., Asst. Vet.

F. G. Kneup, D. V. M., Asst. Vet.

F. A. Kruse, D. V. M., Asst. Vet.

G. E. Mitchell, D. V. M., Asst. Vet. W. F. Moore, D. V. M., Jr. Vet. G. M. Parrish. D. V. M., Jr. Vet. W. Poseiner, D. V. M., Jr. Vet.

W. W. Renter, D. V. M., Asst. Vet. J. A. Rudolph, D. V. M., Jr. Vet.

H. L. Shale, D. V. M., Asst. Vet. C. L. Stricker, D. V. M., Asst. Vet.

C. F. Stroehlein, D. V. M., Asst. Vet. Cleveland-

C. J. Millen, D. V. M., Vet., Insp. in charge.

M. R. Jollie, D. V. M., Asst. Vet., Super.

G. E. Aidman, D. V. M., Asst. Vet.

V. F. Croft, D. V. S., Jr. Vet.

H. A. Fox, D. V. M., B. S., Asst. Tet.

F. E. Hill, D. V. M., Asst. Vet.

L. Kochman, D. V. M., Asst. Vet.

G. C. Mawer, D. V. M., Asst. Vet.

H. H. Myers, V. S., Asst. Vet.
R. P. Salisbury, D. V. M., Asst. Vet.
A. C. Stein, D. V. M., Asst. Vet.

B. H. Steiner, D. V. M., Jr. Vet.

E. E. Steiner, D. V. M., Asst. Vet.

J. T. Stuart, D. V. S., Asst. Vet.

O. W. Everly, D. V. S., Assoc. Vet., Insp. in charge.

T. V. Coe, D. V. M., Asst. Vet.

L. E. Davis, V. S., Asst. Vet.G. D. Jelen, D. V. M., Jr. Vet.

T. E. Nichols, D. V. M., Asst. Vet.

T. M. Powell, D. V. M., Asst. Vet. Dayton-

C. H. Herrold, M. D. V., V. S., Assoc. Vet., Insp. in charge. W. H. Borchers, D. V. M., Asst. Vet.

S. C. Brouse, D. V. M., Asst. Vet.
F. E. Theobald, D. V. M., Asst. Vet.
N. C. Wheeler, M. D. C., B. A., Jr.

#### Fostoria-

A. W. Combs, D. V. M., Asst. Vet., Insp. in charge.

Piqua-

A. N. Smith, V. M. D., Asst. Vet., Insp. in charge.

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FIELD STATIONS-Continued.

Ohio-Continued.

Piqua'-Continued.

J. R. Addison, D. V. M., Jr. Vet. G. C. Juday, D. V. M., Jr. Vet.

Sidney-

F. L. Tritle, D. V. S., Asst. Vet, Insp. in charge.

Washington Court House-

Albert Wiltshire, Prin. Lay Insp., in charge.

Youngstown-

H. L. Bollinger, Prin. Lay Insp., in charge.

Zanesville-

W. O. McHugh, V. S., Asst. Vet., Insp. in charge.

Oklahoma:

Oklahoma City-

E. F. Cary, D. V. S., Assoc. Vet., Insp. in charge.

H. H. Glenn, M. D. C., Asst. Vet.

T. A. Jones, D. V. S., Asst. Vet.

O. H. Leonhart, D. V. S., M. D. C., Asst. Vet.

S. M. Meredith, D. V. S., Asst. Vet. R. R. Parker, D. V. M., Asst. Vet. J. W. Stults, D. V. M., Asst. Vet. W. T. Vilott, D. V. M., Asst. Vet.

### Oregon:

Portland-

P. P. Taylor, D. V. M., Assoc. Vet., Insp. in charge.

A. M. Blackwell, V. S., Asst. Vet.

A. J. Dinse, D. V. S., Asst. Vet.

A. H. Julien, V. S., Asst. Vet.

M. S. Lantz, D. V. S., Asst. Vet. G. D. Loder, D. V. M., Asst. Vet. C. M. Riley, M. D. V., Asst. Vet.

## Pennsylvania:

Allentown-

W. W. Lawson, M. D. C., Assoc. Vet., Insp. in charge.

N. K. Fegley, D. V. S., B. E., Asst. Tet.

J. H. Lowe, M. D. V., Asst. Vet. Erie-

W. C. Wootton, V. S., Assoc. Vet., Insp. in charge.

A. C. Edwards, D. V. M., Asst. Vet. Hallstead-

S. M. Page, V. M. D., Asst. Vet., Insp. in charge.

Harrisburg-

W. C. Siegmund, D. V. S., Assoc. Vet., Insp. in charge.

C. C. Steibing, V. M. D., Jr. Vet.

Philadelphia-

Thomas Castor, V. M. D., Assoc. Vet., Insp. in charge.

D. A. Heyne, V. M. C., Asst. Vet., Supvr.

L. M. Marshall, D. V. M., Asst. Vet., Super.

J. M. Baxter, D. V. M., Asst. Vet.

F. E. Boyd, V. M. D., Asst. Vet.

·FIELD STATIONS-Continued. Pennsylvania-Continued.

Philadelphia-Continued.

M. R. Boyer, D. V. M., Jr. Vet. W. S. Clark, D. V. S., Asst. Vet.

G. M. Garrett, V. M. D., Asst. Vet. S. F. Griesemer, D. V. M., Asst. Vet.

H. D. Hackler, V. S., Asst. Vet.

G. D. Homan, V. M. D., Asst. Vet.

F. S. Hope, V. M. D., Asst. Vet. M. J. Maloney, D. V. M., Asst. Vet.

W. Mink, D. V. M., Asst. Vet. F. A. Pickett, D. V. M., Jr. Vet.

D. W. Rainey, B. S., D. V. M., Jr.

G. T. Van Buskirk, V. M. D., Asst. Vet.

J. H. Zollinger, V. M. D., Asst. Vet. Pittsburgh-

H. K. Walter, D. V. M., Assoc. Vet., Insp. in charge.

J. M. Bowers, D. V. M., Jr. Vet.

W. S. Hileman, V. M. D., Asst. Vet.
G. J. Kiger, D. V. M., Jr. Vet.
H. T. Ludwig, D. V. M., Asst. Vet.

C. E. Moorman, D. V. M., Jr. Vet.

W. A. Smith, D. V. S., Asst. Vet. Pittston-

J. R. Donnelly, V. S., M. D. V., Asst. Vet., Insp. in charge. Pottsville-

G. E. Repp, M. D. C., Asst. Vet., Insp. in charge.

C. E. Brown, D. V. M., Jr. Vet.

Rhode Island:

Providence-

F. S. Bingham, D. V. S., Assoc, Vet., Insp. in charge.

K. G. Cherrington, M. D. V., Asst.

W. J. Comstock, D. V. M., Jr. Vet. South Dakota:

Huron-

C. L. Hall, D. V. S., Assoc. Vet., Insp. in charge.

H. J. Magens, V. S., D. M. C., Jr.

O. R. Whitney, D. V. M., Jr. Vet. Sioux Falls-

C. J. Young, D. V. S., Assoc. Vet., Insp. in charge.

C. B. Bratager, D. V. M., Jr. Vet. M. R. Clarkson, B. S., D. V. M., Jr.

Vet. A. G. Ferrin, D. V. M., Asst. Vet. P. A. Franzmann, D. V. M., Asst.

Vet. N. Hanson, D. V. M., Asst. Vet.

W. J. Scanlon, D. V. M., Asst. Vet. A. E. Slocum, D. V. M., Asst. Vet.

C. L. White, D. V. S., Asst. Vet.

Watertown-

L. P. McArdle, D. V. M., Asst. Vet., Insp. in charge.

E. A. Williams, D. V. M., Asst. Vet.

FIELD STATIONS-Continued.

Tennessee:

Chattanooga-

F. H. Collins, V. D. M., Assoc. Vet., Insp. in charge.

Walter George, V. S., Asst. Vet. Knoxville-

G. H. Woolfolk, D. V. S., Assoc. Vet., Insp. in charge.

J. A. Sluss, D. V. M., Jr. Vet.

O. M. Vorthman, D. V. M., Jr. Vet. Memphis-

F. T. Suit, D. V. M., Assoc. Vet., Insp. in charge.

P. C. Denney, D. V. M., Jr. Vet. R. E. Noyes, D. V. S., Asst. Vet.

Morristown-

W. B. Lincoln, D. V. M., Asst. Vet., Insp. in charge.

Nashville-

C. P. Hart, V. S., Assoc. Vet., Insp. in charge.

J. E. Bender, D. V. M., Asst. Vet. D. O. Browning, D. V. M., Asst. Vet.

H. H. Hobbs, M. D. C., Jr. Vet. W. B. Smith, D. V. M., Asst. Vet. Union City-

J. H. Byerley, D. V. M., Asst. Vet., Insp. in charge.

Texas:

El Paso-

H. R. Collins, D. V. S., Asst. Vet., Insp. in charge.

H. T. Juen, D. V. M., Asst. Vet. Fort Worth-

J. S. Grove, V. S., Assoc. Vet., Insp. in charge. W. C. Alvey, D. V. M., Asst. Vet.

C. P. Callaway, D. V. M., Asst. Vet. E. W. Kern, D. V. M., Asst. Vet.

G. R. Louden, D. V. M., Asst. Vet.

W. K. McConnell, D. V. S., Asst. Vet. P. F. R. Meyer, D. V. M., Asst. Vet.

E. W. Nye, D. V. S., Asst. Vet. J. J. Parker, D. V. S., Asst. Vet. E. E. Peacock, D. V. M., Asst. Vet.

J. S. Powell, D. V. M., Asst. Vet.

J. Ramsey, D. V. M., Asst. Vet. G. J. Roosink, D. V. M., Jr. Vet.

J. A. Wilkinson, D. V. M., Asst. Vet. Houston-

C. F. Palmer, V. S., Assoc. Vet., Insp. in charge.

D. C. Becker, D. V. M., Jr. Vet. S. O. Benson, D. V. M., Jr. Vet.

Texarkana-

H. G. Potter, Prin. Lay Insp., in charge.

Utah:

Ogden-

W. D. Wright, M. D. C., Asst. Vet., Insp. in charge.

J. M. Allen, D. V. M., Jr. Vet.

Salt Lake City-

E. P. Durham, D. V. M., Asst. Vet., Insp. in charge.

C. W. Picht, D. V. M., Jr. Vet.

Vermont:

Bellows Falls-

A. A. Kritt, D. V. M., Asst. Vet., Insp. in charge.

Burlington-

E. E. Manter, D. V. M., Asst. Vet., Insp. in charge.

Hyde Park-

J. L. Orr, D. V. M., Asst. Vet., Insp. in charge.

## Virginia:

Norfolk-

J. M. Harris, Prin. Lay Insp., in charge.

Richmond-

Henry Marshall, V. M. D., Assoc. Vet., Insp. in charge and Traveling Vet. Insp.

J. K. Chapin, D. V. M., Asst. Vet.

T. A. Harrison, D. V. S., Asst. Vet. R. M. Putnam, D. V. M., Asst. Vet.

C. E. Thompson, D. V. M., Asst. Vet. W. I. Wilkins, D. V. M., Asst. Vet.

## Washington:

Seattle-

C. L. Norris, D. V. S., Assoc. Vet., Insp. in charge.

D. S. Kay, D. V. S. A., M. Sc., Asst. Vet.

G. E. Sloulin, V. S., Jr. Vet.

J. G. Warwick, D. V. M., Asst. Vet. J. A. Whealy, D. V. M., Asst. Vet.

Spokane-

J. R. Aufente, D. V. S., Assoc. Vet., Insp. in charge.

N. L. Cissell, D. V. M., Jr. Vet.

C. A. Hulbush, M. D. V., Asst. Vet. W. R. Kidwell, D. V. M., Jr. Vet.

J. H. Stephens, D. V. M., Asst. Vet. Tacoma-

J. S. Kelly, D. V. S., Assoc. Vet., Insp. in charge.

L. C. Bowling, D. V. M., A. B., Jr.

R. A. McDonald, D. V. S., D. V. M., Asst. Vet.

Walla Walla-

R. S. Griffin, D. V. M., Asst. Vet., Insp. in charge.

Yakima-

A. J. Maloney, D. V. M., Asst. Vet., Insp. in charge.

West Virginia:

Wheeling-

G. W. Famous, V. M. D., Assoc. Vet., Insp. in charge.

W. K. Breckenridge, D. V. M., Asst.

F. J. Fike, D. V. M., Jr. Vet.

G. W. Riley, D. V. M., Asst. Vet. Wisconsin:

Eau Claire-

Wm. Fotheringham, V. S., Asst. Vet., Insp. in charge.

FIELD STATIONS-Continued. Wisconsin-Continued.

Green Bay-

W. A. Donegan, Prin. Lay Insp., in charge.

Madison-

L. A. Licking, D. C. M., Asst. Vet., Insp. in charge.

H. F. Arndt, D. V. M., Asst. Vet.

O. A. Christianson, M. D. V., Asst. Vet.

H. A. Gamrath, D. V. M., Jr. Vet. Milwaukee-

A. E. Behnke, D. V. S., Assoc. Vet., Insp. in charge.

R. J. Digman, M. D. C., Asst. Vet.,

Super. S. P. Bolstad, D. V. M., Asst. Vet.

R. E. Cochrane, M. D. V., Asst. Vet.

W. J. Conlin, D. V. M., Jr. Vet.

H. B. Fishback, D. V. M., Asst. Vet. C. L. Gegax, D. V. M., Asst. Vet.

T. A. Head, D. V. M., Asst. Vet.

C. Houston, D. V. M., Asst. Vet.

J. B. Huhn, D. V. M., Jr. Vet.

F. O. Jacobson, D. V. M., Jr. Vet. G. C. Janke, D. V. M., Asst. Vet.

G. Jerome, D. V. M., Asst. Vet.

F. O. Kickbusch, M. D. V., Asst. Vet.

H. C. Kornetzky, D. V. M., Asst. Vet.

F. D. Meier, D. V. M., Asst. Vet.

G. M. Otis, M. D. C., Asst. Vet.

S. A. Richardson, D. V. M., Jr. Vet.

B. D. Robbins, D. V. M., Jr. Vet.

W. C. Smith, D. V. M., Asst. Vet. S. C. Varnum, D. V. M., Jr. Vet. F. J. Verduin, D. V. M., Asst. Vet.

S. J. Walkley, M. D. V., Asst. Vet.

## PACKERS AND STOCKYARDS DIVISION

Directed by Asst. Chief of Bur.

F. W. Miller, D. V. S., Sr. Econ., Asst. Chief.

Trade Practices.

F. W. Miller, D. V. S., Sr. Econ., in charge.

C. A. Briggs, B. S., M. A., Sr. Weighing Engr.

Rates and Registration.

G. N. Dagger, B. A., M. A., LL. B., LL. M., Sr. Econ., in charge.

H. D. Dozier, A. B., M. A., Ph. D., Sr. Econ.

M. O. Cooper, B. S., M. A., LL. B., Sr. Econ.

Henry C. Gibbs, LL. B., LL. M., Sr. Admin. Asst.

S. J. Harvey, Sr. Stat.

Interstate Transportation.

S. O. Fladness, D. V. M., Sr. Vet., in charge.

A. J. Raub, Asst. in Livestock Transp. Inv.

Audits and Accounts.

John J. Bachmann, B. S. C., C. P. A., Chief Acct., in charge.

W. J. Nevius, Exam. of Acct.

M. P. Jacoby, Acct.

R. E. Watson, Assoc. Acct.

H. R. Burnette, Asst. Acct.

C. V. Evans, Asst. Acct.

FIELD HEADQUARTERS.

Colorado-Denver:

B. J. Westinghouse, Sr. Acct.

Illinois:

Chicago-

H. G. Burns, Sr. Acct.

R. L. Cottingham, Asst. Acct.

National Stock Yards-

G. J. Svoboda, Sr. Acct. G. M. Thomas, Asst. Acct.

Minnesota-St. Paul:

E. J. Kohler, Sr. Acct.

Missouri-Kansas City:

E. J. Bolas, Assoc. Acct.

E. R. Hart, Assoc. Acct.

M. W. Taylor, Asst. Acct.

Nebraska-Omaha:

H. M. Baughman, Assoc. Acct.

H. E. Bufkin, Sr. Acct.

Valuation (Field).

Missouri-Kansas City:

H. C. Tenrich, B. S., Chief Valuation Engr.

A. T. Cushing, M. S., Valuation Engr. W. O. Galbreath, B. S., Stockyard Appraiser.

J. E. Johnson, B. S. in C. E., Assoc. Stockyard Appraiser.

A. F. Schramm, A. B., Assoc. Stockyard Appraiser.

H. E. McClintock, C. E., Assoc. Stockyard Appraiser.

Weighing (Field).

Missouri-Kansas City:

F. B. Fell, Assoc. Weight Supvr.

Ohio-Cincinnati:

W. L. Frank, B. S. in Agr., Asst. Weight Supvr.

Stockyard Supervision (Field).

Alabama-Montgomery:

S. M. Price, Dist. Supvr.

California-Los Angeles:

C. D. Ashmore, D. V. S., Dist. Supvr. Colorado-Denver:

J. Christensen, Field Asst. to Chief.

L. W. Krake, Dist. Supvr.

H. E. Armstrong, Asst. Supvr.

Illinois:

Chicago-

V. E. Foster, Dist. Supvr.

M. Guillaume, M. D. V., LL. B., Assoc. Supvr.

T. J. Keogh, Asst. Supvr.

National Stock Yards-

C. S. Jones, B. S., Dist. Supvr.

Indiana-Indianapolis:

A. W. Joy, B. S., Dist. Supvr.

Stockyard Supervision (Field) - Continued. Iowa-Sioux City:

R. L. Lisle, Dist. Supvr.

Kansas-Wichita:

O. E. Dyson, D. V. S., Dist. Supvr.

Minnesota-South St. Paul:

W. A. Williams, Ph. B., Dist. Super. M'ssouri:

Kansas City-

G. E. Butin, D. V. S., Dist. Supvr. South St. Joseph-

J. R. Plumb, A. B., Dist. Supvr.

Nebraska-Omaha:

C. F. Walker, Dist. Supvr. New York:

Buffalo-

J. F. Gibbons, Dist. Supvr.

New York-

F. J. Miller, Dist. Supvr.

Ohio:

Cincinnati-

M. L. Haskel, LL. B., Dist. Supvr. Cleveland-

L. C. Jennings, Dist. Supvr.

Oregon-North Portland:

P. McCormick, jr., B. S., Dist. Supvr. Pennsylvania-Pittsburgh:

A. H. Keener, Acting Dist. Supvr.

Tennessee-Nashville:

T. J. Perrin, Dist. Supvr.

Texas-Fort Worth:

J. H. Ruff, Dist. Supvr.

Public Stockyards Inspection (Field). Alabama:

Birmingham-

R. H. Nutt, D. V. M., Assoc. Vet.,

Insp. in charge. Montgomery-

R. E. Jackson, V. S., Assoc. Vet., Insp. in charge.

J. M. Lawson, D. V. S., Asst. Vet .. Supvr.

California:

Los Angeles-

E. D. Kennedy, D. V. S., Assoc. Vet., Insp. in charge.

G. E. Golden, M. D. V., Asst. Vet.

So. San Francisco-

H. H. Hicks, M. D. V., Assoc. Vet., Insp. in charge.

Colorado-Denver:

Rudolph Snyder, M. D. C., Vet., Insp. in charge.

W. C. Dye, D. V. S., Asst. Vet., Supvr. C. E. Ranney, D. V. S., Asst. Vet.

F. H. Sharp, D. V. M., Jr. Vet.

District of Columbia-Washington: A. R. Smith, V. M. D., Assoc. Vet.,

Insp. in charge.

Florida—Jacksonville:
T. W. Cole, D. V. M., Vet., Insp. in charge.

J. W. Casey, D. V. M., Asst. Vet.

Georgia-Atlanta:

A. L. Hirleman, D. V. M., Assoc. Vet., Insp. in charge.

Public Stockyards Inspection (Field) - Contd. | Public Stockyards Inspection (Field) - Contd. Illinois:

Chicago-

Herman Busman, V. S., M. D., Sr. Vet., Insp. in charge.

W. W. Worcester, V. S., Asst. Vet .. Super.

 C. P. Branigan, M. D. C.
 F. C. Mau, D. V. M., Asst. Vet.
 B. H. Steigleder, D. V. M., Asst. Vet. Israel Wallman, D. V. M., Asst. Vet. National Stock Yards-

C. F. Payne, V. S., Sr. Vet., Insp. in charge.

A. R. Zumwalt, D. V. M., Asst. Vet.,

T. R. Cairns, D. V. M., Asst. Vet.

C. R. Graham, D. V. M., Asst. Vet. Indiana:

Evansville-

O. W. Noyes, D. V. S., Assoc. Vet., Insp. in charge.

J. W. Harner, B. S., D. V. M., Asst.

Indianapolis-

O. Hornlein, M. D. V., Vet., Insp. in

R. C. Vermillion, V. S., D. V. M., Asst. Vet., Super.

J. S. Reno, D. V. M., Asst. Vet. Iowa-Sioux City:

A. D. Bullock, D. V. M., Sr. Vet., Insp in charge.

Perry Zenor, B. S., M. D. C., Asst. Vet., Supvr.

A. W. Bennett, D. V. M., Asst. Vet. E. O. Gisel, D. V. M., Asst. Vet. Kansas:

Kansas City-

J. S. Jenison, D. V. M., Sr. Vet., Insp. in charge.

John Dickson, D. C. M., Asst. Vet.,

E. V. Beaumont, D. V. S., Asst. Vet. C. C. Ettling, D. V. S., Asst. Vet.

G. E. Maxwell, D. V. S., Asst. Vet. W. E. Patterson, D. V. S., Asst. Vet. Wichita-

E. W. Barthold, M. D. C., Assoc. Vet., Insp. in charge.

C. W. Barnhart, D. V. S., Asst. Vet., Supvr.

Kentucky-Louisville:

J. B. Johnson, D. V. M., Assoc. Vet., Insp. in charge.

Guy Bard, V. M. D., Asst. Vet., Super. H. H. Myers, V. S., Asst. Vet.

Louisiana-New Orleans:

G. T. Cole, V. M. D., Assoc. Vet., Inspr. in charge.

E. A. Corbin, M. D. C., Jr. Vet.

Maryland-Baltimore:

R. W. Culbert, M. D. V., Sr. Vet., Insp. in charge.

A. B. Angell, V. S., M. D. V., Asst. Vet.

Massachusetts-Boston:

E. A. Crossman, M. D. V., Sr. Vet., Insp. in charge.

W. A. Nannery, M. D. V., Asst. Vet.

Michigan-Detroit:

R. F. Vermilya, D. M. C., Vet., Insp. in charge.

W. G. Adams, D. V. M., Asst. Vet.

Minnesota-South St. Paul:

G. E. Totten, M. D. C., Sr. Vet., Insp. in charge,

Irvin Owens, D. V. S., Asst. Vet., Supur.

R. H. Harrison, D. V. S., Asst. Vet.

C. E. Redden, D. V. M., Asst. Vet.

R. J. Spain, D. V. M., Asst. Vet.

Mississippi-Meridian :

Hartwell Robbins, D. V. S., Vet., Insp. in charge.

E. J. Meixel. D. V. S., Asst. Vet.

Missouri-South St. Joseph:

B. J. Stockler, D. V. M., Vet., Insp. in charge.

E. J. Cary, D. V. S., Asst. Vet., Super. C. J. Hayward, D. V. M., Asst. Vet. Nebraska—Omaba:

Frank Jelen, D. V. S., Sr. Vet., Insp. in charge.

D. C. Murdock, M. D. C., Asst. Vet., Supvr.

H. M. Batchelder, D. V. M., Jr. Vet. G. P. Everly, D. V. S., Asst. Vet.

C. A. Jerome, D. V. S., Asst. Vet. H. O. Kelpe, D. V. S., Asst. Vet.

New Jersey-Jersey City:

E. H. Baumann, D. V. M., Assoc. Vet., Insp. in charge.

M. J. Myers, V. S., Asst. Vet., Supvr. New York:

Buffalo-

B. P. Wende, V. S., Sr. Vet., Insp. in charge.

W. R. Fleming, D. V. S., Asst. Vet. New York-

D. R. Gillies, V. S., M. D., Sr. Vet., Insp. in charge.

H. S. Nevius, D. V. M., Jr. Vet.

Cincinnati-

W. C. Herrold, V. S., Vet., Insp. in charge.

F. B. Drake, D. V. M., Asst. Vet., Super.

Cleveland-

C. J. Millen, D. V. M., Vet., Insp. in charge.

G. C. Mawer, D. V. M., Asst. Vet.

Dayton-

C. H. Herrold, M. D. V., V. S., Assoc. Vet., Insp. in charge.

Oklahoma-Oklahoma City:

L. J. Allen, V. S., Sr. Vet., Insp. in charge.

A. H. Denham, D. V. S., Asst. Vet., Supvr.

Public Stockyards Inspection (Field)-Contd. [ Oregon-Portland:

P. P. Taylor, D. V. M., Assoc. Vet., Insp. in charge.

A. M. Blackwell, V. S., Asst. Vet., Supvr.

#### Pennsylvania:

Lancaster-

H. S. Weber, M. D. V., Assoc. Vet., Insp. in charge.

Philadelphia-

Thomas Castor, V. M. D., Assoc. Vet., Insp. in charge.

F. S. Hope, V. M. D., Asst. Vet.

Pittsburgh-

H. K. Walter, D. V. M., Assoc. Vet., Insp. in charge.

W. A. Smith, D. V. S., Asst. Vet., Supvr.

South Dakota-Sioux Falls:

C. J. Young, D. V. S., Assoc. Vet., Insp. in charge.

#### Tennessee:

Chattanooga-

F. H. Collins, V. M. D., Assoc. Vet., Insp. in charge.

Memphis-

F. T. Suit, D. V. M., Assoc. Vet., Insp. in charge.

Nashville-

C. P. Hart, V. S., Assoc. Vet., Insp. in charge.

J. E. Bender, D. V. M., Asst. Vet.

## Texas:

Forth Worth-

H. L. Darby, D. V. S., Sr. Vet., Insp. in charge.

A. J. Clark, D. V. M., Asst. Vet. W. L. Endsley, D. V. S., Asst. Vet.,

G. F. Flaherty, D. V. M., Asst. Vet. B. A. Taylor, D. V. M., Asst. Vet.

D. E. Warner, D. V. M., Asst. Vet.

San Antonio-

Wm. Thompson, M. D. C., Assoc. Vet., Insp. in charge.

J. S. Oldham, D. V. M., Asst. Vet.

North Salt Lake City-

E. P. Durham, D. V. M., Asst. Vet., Insp. in charge.

Ogden-

F. E. Murray, D. V. M., Assoc. Vet., Insp. in charge.

M. A. Sappington, D. V. S., Asst. Vet.

Virginia-Richmond:

Henry Marshall, V. M. D., Assoc. Vet. Insp. in charge.

R. M. Putnam, D. V. M., Asst. Vet. Washington:

#### Seattle-

C. L. Norris, D. V. S., Assoc. Vet., Insp. in charge.

J. G. Warwick, D. V. M., Asst. Vet.

Public Stockyards Inspection (Field)-Contd. Washington-Continued.

Spokane-

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West Virginia-Wheeling:

G. W. Famous, V. M. D., Assoc. Vet., Insp. in charge.

Wisconsin-Milwaukee:

A. E. Behnke, D. V. S., Assoc. Vet., Insp. in charge.

R. E. Cochrane, M. D. V., Asst. Vet.

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#### Poultry Diseases.

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Stock Poisoning by Plants.

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Robert J. Formad, V. M. D., M. D., Path. Gilbert T. Creech, D. V. S., Vet.

## Branch Pathological Laboratories.

Colorado-Denver:

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Maurice S. Shahan, D. V. M., Jr. Vet. Maude E. Dye,\* Under Sci. Helper.

Illinois-Chicago:

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Hubert Bunyea, A. B., D. V. S., Assoc. Vet.

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L. L. Denson, Jr., D. V. M., Asst. Vet. J. W. Giffee, D. V. M., Asst. Vet.

Missouri-Jefferson City:

Ralph Graham, D. V. M., Assoc. Vet. (coop.), Insp. in charge.

T. J. Eagle, D. V. S., Asst. Vet. G. H. Elliott, D. V. S., Asst. Vet.

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Marvin Gregory, D. V. M., Asst. Vet. E. C. Hughes, D. V. M., Jr. Vet.

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Montana—Helena:
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H. T. D. Lackie, D. V. M., Asst. Vet. Jas. B. Lavender, D. V. M., Jr. Vet. FIELD STATIONS-Continued. Nebraska-Lincoln-Continued. Neil Plank, D. V. M., Asst. Vet. D. M. Purdy, B. S. A., D. V. M., Asst. Tet.

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in charge. H. A. Downey, D. V. M., Asst. Vet.

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H. E. Mullen, D. V. M., Asst. Vet.

R. E. Nelson, D. V. M., Asst. Vet.

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Colorado-Denver:

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Vet., Insp. in charge. Henry Tornow, D. V. S., Asst. Vet.

Georgia-Albany:

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Kansas City-

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Rodents-Continued.

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<sup>5</sup> Plant Quarantine and Control Administration employee.

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<sup>&</sup>lt;sup>2</sup> Cooperative protector; Bureau of Reclamation employee.

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Rudolph Dieffenbach, B. F., Sr. Land Valuation Engr., in charge.

Arthur A. Riemer, Land Valuation Engr., Asst.

R. M. Rutherford, B. S., Assoc. Land Valuation Engr., Asst.

FIELD HEADQUARTERS.

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Oswald E. Recroft, Transitman.

David D. Pugh, Transitman.

Kenneth C. Kern, B. S., Transitman. James M. McQueen, jr., Under Eugr.

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Doren E. Woodward, B. S., Jr. For. Chalmer Jackson, Transitman.

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A. G. Rice, Asst. to Chief.

H. A. Donovan, Chief Clerk and Personnel Off.

S. D. Frissell, A. B., in charge of Ed. Work.

C. A. Wolfe, in charge of Finance and Acct.

J. W. Stevens, in charge of Supplies and Equip.

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J. C. Keane, A. B., Chem.

J. A. Ambler, Ph. B., Ph. D., Assoc. Chem.

C. A. Fort, B. S., M. S., Asst. Chem.

K. Ventré, B. S., Asst. Chem.

S. Byall, B. S., Asst. Chem.

#### Cellulose and Starch.

J. A. Ambler, Ph. B., Ph. D., Assoc. Chem.

F. H. Thurber, B. A., M. A., Ph. D., Assoc. Chem.

R. E. Lothrop, B. E., M. S., Asst. Chem. S. I. Gertler, B. S., A. M., Asst. Chem.

B. C. Sibley, B. S., Jr. Sugar Technol.

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## Cellulose and Starch-Continued.

F. W. Coleman, B. S., Jr. Sugar Technol. R. L. Holmes, B. S., Jr. Sugar Technol.

#### Miscellaneous Carbohydrates.

R. T. Balch, B. S., A. M., Sr. Chem.

E. Yanovsky, B. S., A. M., Ph. D., Chem. J. A. Ambler, Ph. B., Ph. D., Assoc. Chem.

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P. W. Edwards, B. S., Assoc. Engr.

Roy L. Hunt, Ch. E., Assoc. Engr.

R. L. Hanson, B. S., Asst. Engr.

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#### Illustrations.

R. M. Baker, Prin. Eugr. Drft.

## Farm Fires.

H. E. Roethe, B. S., Engr.

E. J. Hoffman, A. B., Ph. D., Assoc. Chem.

Farm Fires-Continued.

Max A. Bradshaw, A. B., M. A., Asst. Engr.

E. A. Beavens, B. S., M. S., Asst. Bact.

Industrial Relations, Exhibits, Public Information, etc.

W. A. Noel, B. S., M. E., Assoc. Engr.

Engineering, Design, and Development Service. J. O. Reed, B. S., Assoc. Engr.

COLOR AND FARM WASTE DIVISION

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H. P. Newton, A. B., M. A., Assoc. Chem. R. H. Nagel, A. B., Asst. Chem.

A. J. Stirton, B. S., Jr. Chem.

#### Catalytic Oxidations.

C. E. Senseman, B. S., A. M., Chem.

J. J. Stubbs, B. S., Jr. Chem.

#### Biological Stains.

W. C. Holmes, A. B., Sr. Chem.

D. F. J. Lynch, A. B., A. M., LL. B., LL. M., Assoc. Chem.

J. T. Scanlan, B. S., M. S., Ph, D., Assoc. Chem.

J. D. Reid, B. S., Jr. Chem.

#### Industrial Fermentations.

O. E. May, A. B., M. S., Ph. D., Chem.

P. A. Wells, B. S., Asst. Chem.

A. J. Moyer, A. B., M. S., Ph. D., Asst. Mycol.

G. E. Ward, B. S., Jr. Chem.

L. B. Lockwood, A. B., A. M., Jr. Mycol.

#### Lignin.

M. Phillips, B. S., M. S., Ph. D., Sr. Chem.

M. J. Goss, A. B., LL. B., Assoc. Chem.

FOOD RESEARCH DIVISION

F. C. Blanck, A. B., Ph. D., Prin. Chem. in charge.

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W. B. Davis, A. B., M. S., Ph. D., Assoc. Chem.

C. G. Church, B. S., M. S., Assoc. Chem.

H. D. Poore, B. S., Assoc. Chem.

J. L. Heid, B. S., Assoc. Chem.

C. W. Eddy, B. S., Jr. Chem.

D. G. Sorber, A. B., Jr. Chem.

W. E. Sutton, Asst. Sci. Aid.

Florida-Winter Haven:

H. von Loesecke, B. S., Sr. Chem.

## Cereal Chemistry.

J. A. LeClerc, B. S., Ph. D., Sr. Chem. L. H. Bailey, A. B., Assoc. Chem.

Jehiel Davidson, B. S., Ph. D., Assoc. Chem.

M. R. Coe, B. S., M. S., Assoc. Chem. Ruth G. Capen, A. B., Jr. Chem.

#### Bacteriology and Microchemistry.

L. H. James, B. S., Ph. D., Sr. Bact. Vinnie A. Pease, B. S., M. S., Ph. D., Assoc. Micros.

H. E. Goresline, B. S., M. S., Ph. D., Assoc. Bact.

T. L. Swenson, B. S., Ph. C., Assoc. Bact.

R. P. Straka, B. S., M. S., Asst. Bact.

H. H. Hall, B. S., Asst. Bact.

E. A. Beavens, B. S., M. S., Asst. Bact.

## Plant Products.

E. K. Nelson, B. S., Sr. Chem. H. H. Mottern, B. S., Asst. Chem.

#### Metals in Foods.

W. S. Hale, B. S., M. S., Asst. Chem. A. Krasnitz, A. B., Asst. Sci. Aid.

## Phytochemistry.

C. E. Sando, B. S., M. S., Ph. D., Sr. Chem.

M. B. Matlack, B. S., M. S., Ph. D., Assoc. Chem.

#### Toxicology.

California-San Francisco:

Floyd DeEds, A. B., M. A., Ph. D., Sr. Toxicologist.

INDUSTRIAL FARM PRODUCTS DIVISION

F. P. Veitch, B. S., M. S., Sc. D., Prin. Chem. in charge.

#### Farm Fabrics.

H. P. Holman, A. B., Sr. Chem.

T. D. Jarrell, B. S., M. S., Assoc. Chem. Martin Leatherman, A. B., M. S., Ph. D., Assoc. Chem.

#### Leather and Tanning Materials.

R. W. Frey, B. S., Chem.

I. D. Clarke, A. B., Assoc. Chem.

R. M. DuBruyne, Assoc. Hide Spec.

L. S. Stuart, B. S., M. S., Assoc. Bact.

P. C. Brigham, Asst. Hide Spec. N. Longbottom, B. S., Asst. Chem.

C. W. Beebe, B. S., Asst. Chem. FIELD HEADQUARTERS.

Oregon-Portland:

C. C. Smoot, B. S., Technol.

#### Naval Stores.

H. P. Holman, A. B., Sr. Chem.

S. Palkin, Ph. B., M. S., Ph. D., Sr.

J. O. Reed, B. S., Assoc. Dev. Engr.

W. C. Smith, A. B., M. S., Asst. Chem. Field Headquarters.

Georgia-Savannah.

G. P. Shingler, B. S., Assoc. Chem.

#### Paper.

T. D. Jarrell, B. S., M. S., Assoc. Chem. J. M. Hankins, B. S., Jr. Chem.

## Agricultural By-Products.

Field Headquarters.

Iowa-Ames:

P. B. Jacobs, B. S., M. S., Sr. Chem.

J. O. Reed, B. S., Assoc. Dev. Engr. H. D. Weihe, B. S., M. S., Asst. Chem.

#### INSECTICIDE DIVISION

R. C. Roark, B. A., M. A., Ph. D., Prin. Chem. in charge.

#### Insecticidal Plants.

F. B. LaForge, B. S., M. A., Ph. D., Sr.

E. P. Clark, M. S., Ph. D., Sr. Chem. H. L. J. Haller, Ch. E., Ph. D., Sr. Chem.

L. E. Smith, B. S., M. S., Assoc. Chem.

F. Acree, Asst. Sci. Aid. H. V. Claborn, Asst. Sci. Aid.

P. S. Schaffer, Asst. Sci. Aid. Field Laboratory.

Maryland-College Park:

J. R. Spies, B. A., M. S., Jr. Chem.

#### Synthetic Organic Insecticides.

C. R. Smith, B. S., Chem.

Field Laboratory.

Maryland-College Park:

Ruth C. Lawless, B. S., M. S., Jr. Chem.

## Spray Residues.

C. R. Gross, B. S., M. S., Assoc. Chem. R. H. Carter, B. A., M. S., Assoc. Chem. J. Hiley, Asst. Sci. Aid. Field Laboratory.

## Washington-Wenatchee:

S. W. Griffin, B. A., M. S., Chem. C. W. Murray, B. S., Asst. Chem. J. E. Fahey, B. S., Jr. Chem. J. F. Cassidy, B. S., Jr. Chem.

## Fluorine Insecticides.

R. H. Carter, B. A., M. S., Assoc. Chem.

## Fumigants.

H. D. Young, B. S., Assoc. Chem. Field Laboratory:

California-Whittier:

H. L. Cupples, B. Ch. E., M. S., Ph. D., Chem.

#### Oil Emulsions.

Field Laboratory.

Louisiana-New Orleans:

L. H. Dawsey, B. S., Ph. D., Asst. Chem.

#### Fungicides.

O. A. Nelson, B. S., M. S., Chem.

## Analytical Work.

F. E. Dearborn, B. S., Ch. E., Assoc.

E. L. Gooden, B. A., Asst. Sci. Aid. Field Laboratory:

Maryland-College Park:

J. R. Spies, B. A., M. S., Jr. Chem.

## Arsenical Insecticides.

C. M. Smith, B. S., Sr. Chem.

## Physical Chemistry Investigations.

C. M. Smith, B. S., Sr. Chem.

O. A. Nelson, B. S., M. S., Chem. H. A. Jones, B. S., M. S., Asst. Chem.

## Toxicological Investigations.

W. A. Gersdorff, B. S., M. S., Asst. Chem.

OIL, FAT, AND WAX LABORATORY

G. S. Jamieson, Ph. B., Ph. D., Sr. Chem. in charge.

W. F. Baughman, B. S., Assoc. Chem.

R. S. McKinney, B. Ch. E., M. S., Asst. Chem.

#### PROTEIN AND NUTRITION DIVISION

D. B. Jones, A. B., Ph. D., Prin. Chem. in charge.

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R. Walker, A. B., Asst. Biochem.

J. P. Divine, D. V. M., LL. B., Sr. Sci. Aid.

#### Proteins.

F. A. Csonka, B. Ch. E., Ph. D., Sr. Chem.

M. J. Horn, B. S., M. S., Ph. D., Asst. Chem.

Chas. E. F. Gersdorff, Asst. Sci. Aid. Sammie Phillips, Jr. Sci. Aid.

#### SOIL INVESTIGATIONS

A. G. McCall, B. S., Ph. D., Chief. SOIL, CHEMISTRY, AND PHYSICS

H. G. Byers, A. B., B. S., A. M., Ph. D., Prin. Chem. in charge.

#### Physics.

L. B. Olmstead, B. S., A. M., Phys.

#### Research in Soil Physics.

L. B. Olmstead, B. S., A. M., Phys. W. H. Fry, A. B., Soil Petrographer.

## Mechanical Analysis.

Lyle T. Alexander, B. S., Asst. Chem. Hubert W. Lakin, Jr. Sci. Aid. T. M. Shaw, Under Sci. Helper.

## Research in Soil Chemistry.

Philip L. Gile, A. B., Sr. Chem. M. S. Anderson, A. B., M. S., Ph. D., Chem.

W. O. Robinson, B. S., M. S., Chem.

I. C. Brown, B. S., M. S., Ph. D., Assoc.

R. S. Holmes, A. B., Assoc. Chem.

J. G. Smith, B. S., M. S., Asst. Chem.

I. C. Feustel, B. S., M. S., Asst. Chem.

#### Routine Analysis.

Glen Edgington, B. S., Asst. Chem. G. J. Hough, B. S., Asst. Chem.

## Soil Erosion.

H. E. Middleton, B. S., M. S., Ph. D., Assoc. Phys.

Clarence S. Slater, B. A., M. S., Asst. Phys.

## SOIL FERTILITY

Oswald Schreiner, B. S., M. S., Ph. D., Prin. Biochem. in charge.

#### Soil and Fertilizer Investigations.

Bailey E. Brown, B. S., M. S., Sr. Biochem.

Soil and Fertilizer Investigations-Continued. Joshua J. Skinner, B. S., M. S., Ph. D., Sr. Biochem.

Lewis A. Hurst, B. S., Biochem. C. C. Fletcher, M. D., Assoc. Chem.

G. V. C. Houghland, B. S., M. S., Ph. D., Assoc. Soil Technol.

FIELD LABORATORIES.

Citrus and Truck Studies.

Florida—Orlando: G. M. Bahrt, B. S., M. S., Asst. Soil Technol.

G. H. Serviss, B. S., M. S., Asst. Agron.

A. E. Hughes, B. S., Ph. D., Agt.

Sugar Cane Soil Studies.

Louisiana—Houma:

Nelson McKaig, Jr., B. S., M. S., Assoc. Soil Technol.

A. M. O'Neal, B. S., Assoc. Soil Technol.

Pecan Soil Studies.

Georgia-Albany:

Earl D. Fowler, B. S., Assoc. Soil Technol.

E. M. Roller, B. S., M. S., Ph. D., Asst. Chem.

Louisiana-Shreveport:

Arthur O. Alben, B. S., M. S., Ph. D., Asst. Soil Technol. Rulon D. Lewis, M. S., Asst. Soil

Technol.

Sugar Beet Soil Studies.

Nebraska—Scottsbluff:

Eugene S. Lyons, B. S., M. S., Assoc. Soil Technol.

North Dakota-Fargo:

R. A. Pendleton, B. S., M. S., Ph. D., Asst. Soil Technol.

Strawberry Soil Studies.

North Carolina-Chadbourn:

R. A. Lineberry, B. S., M. S., Ph. D., Asst. Chem.

Soil Improvement Studies.

Sand Hill Station.

South Carolina-Columbia:

James E. Adams, A. B., M. S., Assoc. Soil Technol.

Hugh M. Boggs, B. S., M. S., Asst. Chem.

Cotton Root-rot Studies.

Texas-Austin .

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H. V. Jordan, B. S., M. A., Assoc. Soil Technol.

E. R. Collins, B. S., Ph. D., Asst. Soil Technol.

W. V. Black, B. S., Asst. Soil Technol.

J. H. Hunter, B. S., M. S., Asst. Soil Technol.

D. R. Ergle, B. S., M. S., Ph. D., Asst. Chem.

Biochemical Investigations of Soils and Fertilizers.

Edmund C. Shorey, A. B., M. A., D. Sc., Sr. Biochem.

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G. P. Walton, B. S., M. S., Assoc. Biochem.

Wilbur R. Leighty, B. S., M. S., Assoc. Biochem.

R. F. Gardiner, B. S., M. S., Asst. Chem. J. B. Martin, A. B., M. S., Asst. Chem. John A. Schricker, B. S., Jr. Chem.

Soil Reaction Studies.

Edward F. Snyder, B. S., Assoc. Chem.

Greenhouse Studies.

Fred R. Reid, Asst. Biochem.

SOIL MICROBIOLOGY

Charles Thom, A. B., A. M., Ph. D., Prin. Mycol. in charge.

Soil Fungi.

Charles Thom, A. B., A. M., Ph. D., Prin. Mycol.

Kenneth Raper, A. B., A. M., Jr. Mycol. Seil Population.

Nathan R. Smith, B. S., Sr. Bact.

H. Humfeld, B. S., A. M., Ph. D., Assoc. Bact.

Soil Inoculation Investigations and Inspection. Lewis T. Leonard, B. S., A. M., Bact. F. W. Marsh, B. S., Asst. Bact.

Samuel H. Newcomer, Under Sci. Helper.

General Laboratory Service.

Nitrogen Laboratory-Daniel Ready, Asst. Sci. Aid.

Miscellaneous Assistant-George W. Irving, Under Sci. Helper.

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W. E. Hearn, B. S., Sr. Soil Sci., Insp. Dist. 2.

T. D. Rice, Ph. B., Sr. Soil Sci., Insp.

M. H. Lapham, B. S., Sr. Soil Sci., Insp. Dist. 5.

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R. Wildermuth, B. S., Asst. Soil Surv.

F. O. Youngs, B. S., Asst. Soil Surv.

S. Rankin B. Bacon, B. S., Jr. Soil Surv. Wm. H. Buckhannan, B. S., Jr. Soil Surv.

R. E. Devereux, A. B., Jr. Soil Surv.

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Wm. G. Harper, B. S., Jr. Soil Surv.

A. H. Hasty, A. B., Jr. Soil Surv. Howard Wm. Higbee, B. S., Jr. Soil Surv.

M. H. Layton, Jr. Soil Surv.

W. D. Lee, B. S., Jr. Soil Surv.

W. J. Leighty, B. S., Jr. Soil Surv.

F. R. Lesh, B. S., Jr. Soil Surv.

J. T. Miller, B. S., Jr. Soil Surv. W. J. Moran, B. S., Jr. Soil Surv.

E. N. Poulson, B. S., M. S., Jr. Soil Surv.

Ray C. Roberts, B. S., Jr. Soil Surv. Arthur E. Shearin, B. S., Jr. Soil Surv. C. S. Simmons, B. S., M. S., Jr. Soil Surv.

H. M. Smith, B. S., Jr. Soil Surv.

L. H. Smith, B. S., Jr. Soil Surv.

L. R. Smith, B. S., Jr. Soil Surv.

G. A. Swenson, B. S., Jr. Soil Surv.

James Thorp, B. S., Jr. Soil Surv.

B. H. Williams, B. S., Jr. Soil Surv.

C. H. Wonser, B. S., Jr. Spil Surv.

## Soil Erosion Investigations.

Hugh H. Bennett, B. S., Sr. Soil Sci. Field Stations.

Iowa-Clarinda:

G. W. Musgrave, B. S., M. S. A., Sci. in Soil Erosion.

Kansas-Hays:

L. C. Aicher, B. S. A., Agt.

R. H. Davis, B. S., Assoc. Sci. in Soil Erosion.

Missouri-Bethany:

R. E. Uhland, B. S., A. M., Assoc. Sci. in Soil Erosion.

North Carolina-Statesville:

J. M. Snyder, B. S., Sci. in Soil Erosion.

## Oklahoma-Guthrie:

S. W. Phillips, B. S., M. S., Sci. in Soil Erosion.

Soil Erosion Investigations-Continued.

Field Stations-Continued.

Texas-Temple:

H. Dunlavy, B. S., M. S., Agt.

H. V. Geib, B. S., M. S., Sci. in Soil Erosion.

Texas-Tyler:

B. H. Hendrickson, B. S., Sci. in Soil Erosion.

Washington-Pullman:

W. A. Rockie, B. S., Sci. in Soil Erosion.

## Peat Investigations.

Alfred P. Dachnowski-Stokes, Ph. D., Physiol.

## FERTILIZER AND FIXED NITROGEN INVESTIGATIONS

C. H. Kunsman, B. S., M. S., Ph. D., Acting Chief.

O. L. Helsley, Excc. Asst.

Mildred S. Sherman,\* A. B., M. S., Libr.

DIVISION OF PHYSICS AND PHYSICAL CHEMISTRY

---, in charge.

## Spectro-analysis and Photo-chemistry.

O. R. Wulf, B. S., M. S., Ph. D., Chem.

E. J. Jones, B. S., Ch. E., Asst. Phys.

E. H. Melvin, B. S., Ph. D., Asst. Chem. U. Liddel, A. B., Asst. Chem.

Mathematics.

W. E. Deming, B. S., M. S., Ph. D., Assoc. Phys.

L. E. Shupe, A. B., A. M., Asst. Sci. Aid. Catalysis.

P. H. Emmett, B. S., Ph. D., Chem.

J. F. Shultz, B. S., M. S., Asst. Chem.

R. W. Harkness, B. S., Ph. D., Asst.

Katharine S. Love, A. B., M. S., Jr. Chem. S. Brunauer, A. B., M. S., Jr. Chem.

## Gas Constants and Analysis.

R. Wiebe, B. S., Ph. D., Assoc. Chem.

R. T. Milner, B. S., M. S., Ph. D., Assoc. Chem.

V. L. Gaddy, A. B., Asst. Chem. Engr.

J. C. Southard, B. S., Ph. D., Asst. Chem.

T. H. Tremearne, Jr. Chem. Engr.E. Z. Kibbe, A. B., Jr. Chem.

C. P. Heins, Jr., Jr. Sci. Aid.

X-ray and Crystallography. S. B. Hendricks, B. Ch. E., M. S., Ph. D.,

M. E. Jefferson, A. B., Jr. Phys.

V. M. Mosley, Jr. Sci. Aid.

#### Activation and Ionization.

A. K. Brewer, Ph. B., M. S., Ph. D., Assoc. Phys.

R. A. Nelson, B. S., Jr. Phys.

P. D. Kueck, Jr. Sci. Aid.

R. R. Miller, A. B., Asst. Sci. Aid.

DIVISION OF FERTILIZER TECHNOLOGY

----, in charge.

Transformation of Nitrogen Compounds.
R. O. E. Davis, Ph. B., Ph. D., Sr.
Chem.

W. Scholl, Ch. E., M. S., Asst. Chem. J. Y. Yee, B. S., M. S., Assoc. Chem.

#### Economics.

P. E. Howard, B. S., Sr. Chem. Engr.

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- J. W. Turrentine, Ph. B., M. S., Ph. D., Sr. Chem.
- S. L. Madorsky, B. S., Ph. D., Assoc. Chem.
- E. J. Fox, A. B., M. S., Assoc. Chem.
- J. R. Adams, B. S., Assoc. Chem.
- D. L. Reed, A. B., M. S., Asst. Chem.
- J. C. Bryan, Under Lab. Appr.

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- II. E. Patten, A. B., A. M., Ph. D., Asst.
- L. E. Bowe, A. B., M. S., Asst. Chem.
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- T. P. Hignett, A. B., Jr. Chem.

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- W. L. Hill, B. S., M. S., Asst. Chem.
- D. S. Reynolds, B. S., Asst. Chem.
- H. L. Marshall, B. S., M. S., Asst. Chem. L. F. Rader, jr., Jr. Sci. Aid.

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- Assoc. Chem.
- A. L. Mehring, A. B., Assoc. Chem.
- F. O. Lundstrom, A. B., M. S., Asst. Chem.

#### Concentrated Fertilizers-Continued.

- J. O. Hardesty, A. B., M. S., Asst. Chem. K. C. Beeson, B. S., M. S., Asst. Chem.
- Lawrence M. White, A. B., M. S., Jr. Chem.
- A. J. Peterson, A. B., Jr. Sci. Aid.

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- D. Burk, B. S., Ph. D., Assoc. Phys. Chem.
- C. A. Ludwig, B. S. A., M. S. A., Ph. D., Assoc. Plant Phys.
- H. Lineweaver, B. S., Jr. Chem.
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- G. E. Hilbert, Ch. E., M. S., Ph. D., Assoc. Chem.
- F. M. Schertz, B. S., M. A., Ph. D., Assoc. Biochem.
- L. A. Pinck, B. S., Ch. E., M. S., Asst. Chem.
- L. B. Howard, B. S., M. S., Ph. D., Asst. Chem.
- C. E. Rist, A. B., Jr. Chem.
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- W. L. Edwards, C. E., Assoc. Engr.
- J. R. Dilley, M. E., Assoc. Mech. Engr. Constance Sherry,\* Asst. Drft.
- J. F. Mullins, Chief Engr. Aid.
- L. Testa, Prin. Glassblower.
- A. D. Mack, Sr. Glassblower.
- J. Reuter, Prin. Instrument Maker.
- F. F. Robey, Sr. Mech.
- J. B. Kershaw, Prin. Lab. Mech.

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- J. M. Kemper, Asst. to Chief, Admin.

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Vacant.

New England States-

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- A. B. Nystrom, M. S., Sr. Dairy Husb. Western States—
  - R. C. Jones, B. S., Sr. Dairy Husb.

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- G. R. Greenbank, B. A., Ph. D., Assoc.
- H. R. Curran, B. S., Ph. D., Assoc. Bact. E. F. Deysher, B. S., Asst. Chem.

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P. A. Wright, M. A., Asst. Chem.

F. E. Kurtz, B. S., Asst. Chem.

B. W. Webb, M. S., Ph. D., Assoc. Dairy Mfg. Spec.

#### Cheese Manufacturing Investigations.

K. J. Matheson, B. S., Sr. Dairy Mfg. Spec.

L. A. Burkey, M. S., Ph. D., Assoc. Bact.

G. P. Sanders, M. S., Ph. D., Asst. Chem.

A. J. Boyer, B. S., Asst. Dairy Mfg. Spec. S. A. Hall, B. S., Asst. Dairy Mfg. Spec.

R. R. Farrar, B. S., Jr. Dairy Mfg. Spec.

#### Butter and By-Products.

P. D. Watson, B. S., Asst. Chem. Emily Grewe, B. Ed., M. A., Ph. D., Asst. Home Econ. Spec.

#### Ice Cream Investigations.

Alan Leighton, B. S., Sr. Chem.

O. E. Williams, B. S., Asst. Dairy Mfg.

Abraham Leviton, M. S., Jr. Chem.

## Nutrition of Dairy Cows.

E. B. Meigs, A. B., M. D., Sr. Physiol,

C. A. Cary, B. S., Chem.

B. H. Nicolet, A. B., Ph. D., Sr. Chem.

W. A. Turner, M. A., Ph. D., Assoc. Chem.

H. T. Converse, B. S., Assoc. Dairy Husb. A. M. Hartman, M. S., Asst. Chem.

E. A. Kane. M. S., Asst. Chem.

H. G. Wiseman. B. S., Asst. Chem.

C. B. Parker, M. S., Jr. Chem.

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T. E. Woodward, M. S., Sr. Dairy Husb. F. W. Miller, D. V. M., M. S. A., Sr. Vet. and Physiol.

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Histol. J. B. Shepherd, B. S. A., Assoc. Dairy

Husb. C. A. Matthews, M. S., Asst. Dairy Husb.

C. J. Stauber, Asst. Dairy Husb. FIELD STATIONS.

Louisiana-Jeanerette:

S. L. Catheart, B. S., Agt. in Dairying (Coop.).

#### Maryland-Beltsville:

T. W. Moseley, M. S., Dairy Husb. Supt.

J. H. Kruger, B. S., Asst. Dairy Husb.

| FIELD STATIONS-Continued.

Missouri-Hannibal:

(Supt. not yet designated.)

Montana-Huntley:

D. V. Kopland, B. S., Asst. Dairy Husb

North Dakota-Mandan:

A. L. Watt, M. S., Agt. in Dairying (Coop.) Supt.

Oklahoma-Woodward:

A. G. Van Horn, B. S. A., Agt. in Dairying (Coop.) Supt.

South Carolina--Columbia:

J. A. Riley, M. S., Agt. (Coop.) Supt. E. W. Faires, B. S., .1gt. (Coop.).

South Dakota-Ardmore:

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#### DIVISION OF MARKET-MILK INVESTI-GATIONS

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F M. Grant, B. S., Asst. Mkt. Milk Spec.

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H R. Lochry, B. S., Asst. Dairy Mfg.

Pennsylvania-Grove City:

R. F. Flint, Agt. in Dairying (Coop.).

Tennessee-Nashville:

L. S. Edwards Asst. Dairy Mfg. Spec. (Coop.).

Wisconsin-Monroe:

R. E. Hardell, B. S. A., Assoc. Dairy Mfg. Spec.

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-, Prin. Ent., in charge. B. A. Porter, B. S., Ph. D., Ent. Carlo Zeimet, Asst. Bibl. Ent.

#### Apple Insects.

P. W. Mason, M. S., Ph. D,. Assoc. Ent. (aphid studies).

FIELD LABORATORIES.

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A. J. Ackerman, M. S., Ent., in charge.

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F. H. Lathrop, B. S., Ph. D., Sr. Ent., in charge.

R. F. Sazama, B. S., Asst. Ent.

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#### Grape Insects.

FIELD LABORATORY.

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G. A. Runner, Assoc. Ent., in charge.

#### Nut Insects.

FIELD LABORATORIES.

Georgia:

Albany-

G. F. Moznette, B. S., Ent., in charge.

Herbert Spencer, M. S., Ph. D., Luther Brown, B. S., Assoc. Ent.

H. S. Adair, B. S., Asst. Ent.

Experiment (branch of Albany, Ga., 1ab.)--

T. L. Bissell, B. S., Asst. Ent.

Louisiana-Shreveport (Branch of Albany, Ga., lab.): H. Baker, B. S., Asst. Ent.

Texas-Brownwood (branch of Albany, Ga., lab.)— C. B. Nickels, M. S., Assoc. Ent.

W. C. Pierce, B. S., Jr. Ent.

## Peach Insects.

FIELD LABORATORIES.

France-Nice:

G. J. Haeussler, B. S., Asst. Ent., in charge.

#### Georgia:

Cornelia--

L. F. Steiner, M. S., Asst. Ent., in charge.

D. W. Hamilton, B. S., Jr. Ent.

Fort Valley-

O. I. Snapp, M. S., Ent., in charge. J. R. Thomson, jr., M. S., Jr. Ent.

Indiana-Vincennes:

Wm. P. Yetter, jr., M. S., Assoc. Ent. J. F. Cooper, B. S., Jr. Ent.

New Jersey-Moorestown:

II. W. Allen, Ph. D., Ent. (in charge of oriental fruit moth parasite inv.).

J. K. Holloway, B. S., Asst. Ent.

H. J. Willard, Asst. Sci. Aid.

John Gray, M. S., Ph. D., Ent. (in charge oriental fruit moth ecology).

## Tennessee-Harriman:

H. G. Butler, M. S., Asst. Ent., in charge.

J. L. Gardiner, B. S., Jr. Ent.

#### Blueberry Maggot.

FIELD LABORATORY.

Maine-Cherryfield:

L. C. McAlister, jr., B. S., Asst. Ent., in charge.

#### Plant Disinfection Investigations.

FIELD LABORATORY.

New Jersey-Moorestown:

J. W. Lipp, M. S., Asst. Ent.

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L. B. Parker, B. S., Asst. Ent.

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 I. M. Hawley, B. A., Ph. D., Sr. Ent.
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M. R. Osburn, M. S., Asst. Ent.

F. E. Baker, B. S., Asst. Ent.

M. II. Brunson, M. S., Asst. Ent. R. T. White, B. S., Asst. Ent.

J. W. Balock, B. S., Jr. Ent.

R. J. Sim, Chief Illustr. (Ent.).

New York-Westbury:

H. C. Hallock, LL. B., M. S., Assoc. Ent.

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C. A. Weigel, M. S., Ph. D., Sr. Ent. Eva B. Fitzgerald,\* B. A., Sr. Sci. Aid. Eleanor D. Booth, B. A., Sr. Sci. Aid.

#### Citrus Insects.

FIELD LABORATORIES.

California:

Lindsay (branch of Whittier, Calif., lab.) (citrus thrips.)-

E. A. McGregor, A. M., Assoc. Ent., in charge.

Whittier (regional lab.)-

F. R. Cole, A. M., Ph. D., Assoc. Ent., in charge.

C. I. Bliss, M. S., Ph. D., Ent. Bessie M. Broadbent, B. S., Asst.

H. R. Yust, A. B., M. S., Sr. Sci. Aid.

Lillian Baird, A. B., Biol, Aid (Ent.)

D. L. Hubbart, Under Biol. Aid (Ent.)

Cuba-Santiago de las Vegas (parasites of citrus black fly):

P. A. Berry, B. S., Jr. Ent., in charge.

J. M. McGough, M. S., Jr. Ent.

Citrus Insects-Continued.

FIELD LABORATORIES-Continued.

Federated Malay States - Kuala Lumpur (parasites of citrus black

C. P. Clausen, M. S., Sr. Ent., in charge.

Florida-Orlando:

W. W. Yothers, B. S., A. B., Ent., in charae.

Ralph L. Miller, M. S., Ph. D., Assoc. Ent.

Ione P. Bassett,\* B. S., Sr. Sci. Aid.

Mediterranean Fruit Fly.

(Note.-In cooperation with, and from funds allotted from, the Plant Quarantine and Control Administration.) FIELD LABORATORIES.

Hawaii-Honolulu:

O. C. McBride, B. S., M. A., Ent., in charge.

A. C. Mason, M. S., Assoc. Ent. Miyauooto McPhail, B. S., Asst. Ent.

C. B. Keck, M. S., Jr. Ent.

W. H. Mitchell, jr., Agt.

R. H. Marlowe, B. S., Sr. Sci. Aid. Tai Hee Hong, M. S., Agt.

Kam Hu Lau, Jr. Chem. Engr.

## Tropical Insects, Including Fruit Flies.

FIELD LABORATORIES.

Canal Zone-Balboa:

James Zetek, A. B., Assoc. Ent., in

Maria T. Paredes, Under Biol. Aid (Ent.).

Mexico:

Cuernavaca (branch of Mexico City lab.) ---

C. C. Plummer, M. S., Asst. Ent. Mexico City, D. F. (Mexican fruit worm)-

W. E. Stone, B. S., Assoc. Ent., in charge.

## Insects Affecting Ornamentals.

Bulb Insects.

FIELD LABORATORIES.

New York-Babylon:

F. J. Spruijt, M. S., Asst. Ent., in charge,

F. S. Blanton, B. S. A., Jr. Ent.

Washington—Sumner:

C. F. Doucette, B. S., Assoc. Ent., in charge.

R. Latta, M. S., Asst. Ent.

R. H. Nelson, B. S., Jr. Ent.

R. Schopp, B. S., Jr. Ent.

#### Greenhouse Insects.

C. A. Weigel, M. S., Ph. D., Sr. Ent., in charge.

F. F. Smith, M. S., Ph. D., Ent.

H. H. Richardson, M. S., Ph. D., Asst. Ent.

FIELD LABORATORY.

California-Whittier:

C. H. Martin, M. S., Asst. Ent.

<sup>1</sup> Paid from Bureau of Entomology funds.

Insects Affecting Ornamentals-Continued. Miscellaneous Ornamentals (Camphor Scale).

FIELD LABORATORY.

Louisiana-New Orleans:

A. W. Cressman, B. S., Assoc. Ent., in charge.

Lorraine T. Kessels,\* B. S., Sr. Sci. Aid.

#### Parlatoria Date Scale.

FIELD LABORATORIES.

California-Indio and Whittier: F. S. Stickney, M. S., Ph. D., Assoc, Ent., in charge.

#### DIVISION OF TRUCK-CROP INSECTS

-, Prin. Ent., in charge. W. H. White, B. S., Ent.

Mary F. Benson,\* Sr. Sci. Illustr.

Taxonomy of Truck-Crop Insects.

Doris H. Blake, \* A. M., Asst. Ent.

## Miscellaneous Truck-Crop Insects.

FIELD LABORATORIES.

California:

Alhambra-

J. C. Elmore, B. S., Asst. Ent. Jose (branch of Alhambra, Calif., lab.)-

O. W. Lovell, B. S., Agt.

Louisiana-Baton Rouge:

C. E. Smith, M. S., Assoc. Ent., in charge.

Norman Allen, M. S., Jr. Ent.

Mississippi-Gulfport:

M. M. High, B. S., Assoc. Ent., in charge.

North Carolina-Chadbourn:

W. A. Thomas, B. S., Asst. Ent., in charge.

W. J. Reid, jr., B. S., Asst. Ent.

Washington-Puyallup:

S. E. Crumb, A. B., Ent., in charge. C. W. Getzendaner, B. S., Jr. Ent.

#### Sugar-Beet Insects.

FIELD LABORATORIES.

California:

Berkeley (branch of Twin Falls, Idaho, lab.)-

C. H. Clifton, M. S., Ph. D., Agt. Davis (branch of Twin Falls, Idaho, lab.)-

W. C. Cook, M. S., Ph. D., Ent.

F. R. Lawson, A. B., Jr. Ent. Riverside (branch of Twin Falls,

Idaho, lab.)-H. E. Wallace, M. S., Assoc. Ent.

G. T. York, B. S., Jr. Ent. Colorado-Grand Junction (branch of

Twin Falls, Idaho, lab.): W. A. Shands, M. S., Asst. Ent.

Idaho-Twin Falls:

P. N. Annand, M. A., Ph. D., Ent., in charge.

Sugar-Beet Insects-Continued.

FIELD LABORATORIES-Continued.

Idaho-Twin Falls-Continued.

J. C. Chamberlin, M. A., Ph. D., Assoc. Ent.

C. F. Henderson, M. S., Asst. Ent.

R. A. Fulton, M. S., Ph. D., Agt.

F. B. Hinnenkamp, B. A., Jr. Ent.

H. A. Waters, B. S., Jr. Ent. D. E. Fox, M. S., Jr. Ent.

New Mexico-State College (branch of Twin Falls, Idaho, lab.):

V. E. Romney, M. S., Jr. Ent.

Oregon-Hermiston (branch of Twin Falls, Idaho, lab.):

O. A. Hills, M. S., Jr. Ent.

Utah:

Salt Lake City (branch of Twin Falls, Idaho, lab.)-

E. W. Davis, M. S., Asst. Ent.

H. A. Dorst, M. A., Jr. Ent.

#### Soil Insects.

FIELD LABORATORIES.

California-Alhambra:

R. E. Campbell, M. S., Ent., in charge.

M. W. Stone, B. S., Jr. Ent.

Idaho-Parma (branch of Walla Walla, Wash., lab.):

F. H. Shirck, M. S., Asst. Ent. H. P. Lanchester, M. S., Jr. Ent.

South Carolina-Fairfax:

J. N. Tenhet, B. S., Asst. Ent., in charge.

P. K. Harrison, M. S., Asst. Ent. Washington:

Toppenish (branch of Walla Walla, Wash., lab.)-

K. E. Gibson, M. S., Jr. Ent.

Walla Walla-

M. C. Lane, B. S., Assoc. Ent., in charge.

C. E. Woodworth, M. S., Ph. D., Assoc. Ent.

R. S. Lehman, M. S., Asst. Ent.

E. W. Jones, M. A., Asst. Ent.

## Sweetpotato Weevil Control.

FIELD LABORATORIES.

Alabama-Grand Bay (branch of Biloxi, Miss., lab.):

S. C. Brummitt, Sr. Sci. Aid.

Florida:

#### Sanford-

C. F. Stahl, B. S., Ent., in charge.

C. O. Bare, M. A., Asst. Ent.

C. B. Wisecup, M. S., Asst. Ent.

J. P. Vinzant, B. S., Asst. Sci. Aid.

Mississippi:

Bay St. Louis (branch of Biloxi lab.)-

F. A. Wright, B. A., Jr. Ent.

Biloxi-

K. L. Cockerham, M. S., Assoc. Ent., in charge.

O. T. Deen, B. S., Jr. Ent.

Sweetpotato Weevil Control-Continued.

FIELD LABORATORIES-Continued.

Mississippi-Continued.

Picayune (branch of Biloxi lab.)-W. B. Hollingsworth, B. S., Jr.

M. Brunson, B. S., Jr. Ent.

#### Pea Insects.

FIELD LABORATORY.

Wisconsin-Madison:

J. E. Dudley, jr., M. S., Ent., in

T. E. Bronson, M. S., Jr. Ent.

#### Berry Insects.

FIELD LABORATORIES.

North Carolina-Chadbourn:

L. B. Reed, B. S., Jr. Ent.

Virginia-Roslyn (Arlington Experimental Farm):

C. H. Popenoe, B. S., Assoc. Ent., in charge.

Washington-Puyallup:

J. Wilcox, M. S., Assoc. Ent.

#### Tobacco Insects.

FIELD LABORATORIES.

Arizona-Tempe (branch of Clarksville, Tenn., lab.):

K. B. McKinney, B. S., Asst. Ent.

Florida-Quincy (branch of Clarksville, Tenn., lab.):

F. S. Chamberlin, B. S., Asst. Ent. Tennessee-Clarksville:

A. C. Morgan, B. S., Ent., in charge. J. U. Gilmore, B. S., Asst. Ent. Joe Milam, Prin. Sci. Aid.

#### Bean Insects.

FIELD LABORATORIES.

California-Alhambra:

Rodney Cecil, M. S., Ph. D., Assoc.

Mexico-San Jacinto, D. F. (branch of Columbus, Ohio, lab.):

B. J. Landis, M. S., Asst. Ent.

Mexico-Estancia (branch of Columbus, Ohio, lab.):

J. R. Douglas, M. S., Assoc. Ent., in charge.

R. L. Wallis, B. S., Jr. Ent.

Ohio-Columbus:

N. F. Howard, M. S., Ph. D., Sr. Ent., in charge.

H. C. Mason, M. S., Agt.

Virginia-Norfolk (branch of Columbus, Ohio, lab.):

L. W. Brannon, B. S., Asst. Ent.

#### Mushroom Insects.

FIELD LABORATORY.

Virginia-Rosslyn (Arlington Exp. Farm):

A. C. Davis, M. S., Asst. Ent.

#### DIVISION OF FOREST INSECTS

F. C. Craighead, B. A., M. S., Ph. D., Prin. Ent., in charge.

#### Western Bark Beetles.

FIELD LABORATORIES.

Arizona-Prescott:

M. W. Blackman, Ph. D., Sr. Ent., in charge.

L. G. Baumhofer, B. S., Asst. Ent.

California-Barkeley:

J. M. Miller, B. S., Sr. Ent., in charge.

W. D. Edmonston, Assoc. Ent.

G. R. Struble, M. S., Asst. Ent.

Albert Wagner, Sr. Sci. Aid.

K. A. Salman, B. S., Agt.

Idaho-Coeur d'Alene:

J. C. Evenden, B. S., Ent., in charge.

A. L. Gibson, B. S., Asst. Ent.

H. J. Rust, Sr. Sci. Aid. T. T. Terrell, Asst. Sci. Aid.

Oregon-Portland:

F. P. Keen, B. S., Ent., in charge.

J. A. Beal, B. S., Asst. Ent. W. J. Buckhorn, Sci. Aid.

## Forest-Tree Insects.

#### FIELD LABORATORIES.

Massachusetts-Amherst:

H. J. MacAloney, B. S., M. F., Ph. D., Asst. Ent., in charge.

Michigan-Ann Arbor:

S. A. Graham, B. S., M. F., Ph. D., Collab., in charge.

North Carolina-Asheville:

R. A. St. George, M. S., Assoc. Ent., in charge.

### Forest-Product Insects.

T. E. Snyder, B. A., M. F., Ph. D., Sr.

#### Shade-Tree Insects.

William Middleton, M. A., Ent.

FIELD LABORATORY.

California-Palo Alto:

H. E. Burke, M. S., Ph. D., Sr. Ent.

#### Gipsy Moth and Brown-Tail Moth.

FIELD LABORATORY.

Massachusetts-Melrose Highlands:

C. W. Collins, M. S., Sr. Ent., in charge.

T. H. Jones, B. S., Sr. Ent.

C. F. W. Muesebeck, B. S., Sr. Ent.

R. T. Webber, Assoc. Ent.

C. E. Hood, B. S., Assoc. Ent.

M. T. Smulyan, B. S., Ph. D., Asst. Ent.

J. V. Schaffner, jr., Asst. Ent.

S. F. Potts, M. S., Asst. Ent.

R. C. Brown, B. S., Asst. Ent.

W. L. Baker, B. S., Jr. Ent.

D. L. Parker, B. S., Jr. Ent.

A. B. Proper, M. S., Jr. Ent. Russell R. Whitten, B. S., Jr. Ent.

C. M. Symonds, Agt.

R. Wooldridge, Prin. Sci. Aid.

I. T. Guild, Prin. Sci. Aid.

J. E. R. Holbrook, Sr. Sci. Aid.

J. A. Millar, Sr. Sci. Aid.

C. L. Griswold, Asst. Sci. Aid.

Gipsy Moth and Brown-Tail Moth-Continued. FIELD LABORATORIES-Continued.

Hungary-Budapest (branch of Melrose Highlands, Mass., lab.)

P. B. Dowden, B. S., Assoc. Ent., in charge.

W. F. Sellers, B. S., Asst. Ent.

#### DIVISION OF CEREAL AND FORAGE INSECTS

W. H. Larrimer, M. S., Ph. D., Prin. Ent., in charge.

W. R. Walton, Sr. Ent.

J. S. Wade, Assoc. Ent.

Esther H. Hart, A. B., Prin. Sci. Illustr. Nettie S. Klopfer,\* Under Sci. Helper.

## General Cereal and Forage Insects.

FIELD LABORATORIES.

Arizona-Tempe (clover and alfalfa seed chalcis, corn ear worm, alfalfa caterpillar, grasshoppers, and aphids):

V. L. Wildermuth, B. S., Sr. Ent.,

in charge.

J. C. Frankenfeld, M. S., Assoc. Ent. E. E. Russell, Asst. Ent.

E. G. Davis, B. S., Asst. Ent. Olus L. Barnes, M. S., Jr. Ent.

Loyd L. Stitt, B. S., Jr. Ent. Ethel G. Mitchell, Under Sci. Helper.

Marydea Thomas, Under Sci. Helper. California-Sacramento (grasshoppers, Hessian fly, wireworms, and range craneflies):

W. B. Cartwright, B. S., Ent., in charge.

R. A. Blanchard, A. B., Assoc. Ent. C. C. Wilson, B. S., Asst. Ent.

Georgia-Savannah (branch of Charlottesville, Va., lab.):

G. W. Barber, M. S., D. Sc., Assoc. Ent.

Indiana-West Lafayette (Hessian fly, sod webworms, lesser clover leaf weevil, grasshoppers, and chinch bug):

C. M. Packard, M. S., Sr. Ent., in charge.

H. R. Painter, M. S., Assoc. Ent.

W. B. Noble, B. S., Asst. Ent. Curtis Benton, M. S., Jr. Ent.

Kansas-Wichita (Hessian fly, chinch bug, green bug, white grubs, and false wireworms):

J. R. Horton, B. S., Ent., in charge. E. T. Jones, A. M., Asst. Ent.

H. H. Walkden, B. S., Asst. Ent. W. T. Emery, A. M., Asst. Ent.

Missouri-Webster Groves (Hessian fly, billbugs, wheat jointworm, strawworms, and chinch bug):

A. F. Satterthwait, Assoc. Ent., in charge.

Montana-Bozeman (grasshoppers and crickets):

J. R. Parker, M. S., Ph. D., Sr. Ent., in charge,

General Cereal and Forage Insects-Contd.

FIELD LABORATORIES-Continued.

Montana-Bozeman-Continued.

R. L. Shotwell, A. M., Asst. Ent. F. A. Morton, B. S., Jr. Ent.

Oregon-Forest Grove (clover root borer, wireworms, Hessian fly, wheat midge, aphids, and grasshoppers):

L. P. Rockwood, B. S., Ent., in charge.

T. R. Chamberlin, B. S., Assoc. Ent. M. M. Reeher, A. B., Asst. Ent.

Pennsylvania-Carlisle (Hessian fly and its parasites):

C. C. Hill, B. S., Assoc. Ent., in charge.

J. S. Pinckney, B. S., Asst. Ent. Edgar J. Udine, Jr. Ent.

Texas:

Beaumont (branch of San Antonio, Tex., lab.) (sugarcane moth borer)-

A. I. Balzer, B. S., Asst. Ent.

San Antonio (sorghum midge, grasshoppers, green bug, and southwestern corn borer)-

E. V. Walter, B. S., Assoc. Ent., in charge.

A. A. Mathewson, M. S., Asst. Ent. Lee Seaton, Asst. Sci. Aid.

Utah-Salt Lake City (alfalfa weevil and its parasites): G. I. Reeves, A. B., Sr. Ent., in

charge . J. C. Hamlin, M. S., Ph. D., Assoc.

Ent.S. J. Snow, A. B., Asst. Ent.

Ralph Bunn, A. B., Jr. Ent.

J. L. Joy, B. S., Jr. Ent.

L. J. Jones, B. S., M. A., Jr. Ent. R. C. Newton, B. S., Jr. Ent.

Virginia: Rosslyn (Arlington Exp. Farm) (leaf hoppers and other forage-crop

> insects) -F. W. Poos, M. A., Ph. D., Sr. Ent., in charge.

J. W. Scrivener, Agt.

Nancy H. Wheeler,\* Asst. Sci. Aid. Charlottesville (wheat jointworm, corn ear worm, and larger cornstalk borer)-

W. J. Phillips, M. S., Ph. D., Sr. Ent., in charge. F. F. Dicke, B. S., Asst. Ent.

#### Sugarcane, Corn, and Rice Insects.

FIELD LABORATORIES.

Louisiana:

Crowley (under direction of Sr. Ent. in charge of New Orleans, La., lab.) (rice insects)-

W. A. Douglas, B. S., Jr. Ent. Houma (under direction of Sr. Ent. in charge of New Orleans, La., lab.) (rice insects)-

J. W. Ingram, B. S., Asst. Ent.

Sugarcane, Corn, and Rice Insects-Contd. FIELD LABORATORIES-Continued.

Louisiana-Continued. Houma-Continued.

E. K. Bynum, B. S., A. M., Asst.

New Orleans-

T. E. Holloway, B. S., Sr. Ent., in charge.

W. E. Haley, Chief Sci. Aid.

Peru-Trujillo:

H. A. Jaynes, B. S., Assoc. Ent.

## European Corn Borer.

FIELD LABORATORIES.

France-Hyères, Var (parasites of corn borer):

H. L. Parker, B. S., D. Sc., Ent., in charge.

H. D. Smith, B. S., Asst. Ent.

Japan-Yokohama:

C. A. Clark, B. S., Asst. Ent.

Massachusetts—Arlington:
D. W. Jones, B. S., Ent., in charge.

C. H. Batchelder, M. S., Ph. D., Assoc. Ent.

B. E. Hodgson, B. S., Assoc. Ent.

S. M. Dohanian, M. S., Assoc. Ent. A. M. Vance, M. S., Asst. Ent.

W. G. Bradley, B. S., Asst. Ent.

R. C. Ellis, Asst. Ent.

Kenneth A. Bartlett, M. S., Asst. Ent.

R. A. Biron, B. S., Jr. Ent.
 D. D. Questel, B. S., Jr. Ent.

Sam. O. Hill, B. S., Jr. Ent.

John Coveney, B. S., Jr. Ent. Emory D. Burgess, B. S., Jr. Ent.

N. J. Nerney, Agt.

F. S. Vidler, Sr. Mech.

H. J. Cronin, Sr. Sci. Aid. Michigan-Monroe:

Philip Luginbill. A. M., Ph. D., Assoc. Ent., in charge.

F. L. Simanton, A. M., Assoc. Ent.

W. A. Baker, B. S., Assoc. Ent.

L. G. Jones, B. S., Jr. Ent. K. D. Arbuthnot, B. S., Jr. Ent.

G. T. Bottger, B. S., Jr. Ent.

R. J. Webb, B. S., Jr. Ent.

Ralph F. Mathes, M. S., Jr. Ent. Virgil F. Kent, M. S., Jr. Ent.

E. W. Beck, A. B., Jr. Ent.

New York:

Bayshore, L. I. (branch of Arlington, Mass., lab.)-

R. E. Kimport, B. S., Agt.

Silver Creek-

L. B. Scott, B. S., Asst. Ent., in charge.

K. W. MacLowry, B. S., Agt. Yonkers (branch of Arlington, Mass., lab.)-

M. E. Ryberg, B. S., Agt.

## Ohio:

## Sandusky-

L. H. Patch, B. S., Assoc. Ent., in

G. W. Still, B. S., Asst. Ent.

European Corn Borer-Continued.

FIELD LABORATORIES—Continued. Ohio-Continued.

Sandusky-Continued.

C. A. Crooks, B. S., Jr. Ent. Bernard A. App, A. B., Jr. Ent. L. L. Peirce, Agt.

Toledo-

D. J. Caffrey, B. S., Sr. Ent., in charge of research.

K. W. Babcock, B. S., Assoc. Ent. Morris Schlosberg, M. S., Asst. Ent.

Ray T. Everly, B. S., Jr. Ent. L. II. Colby, Agt.

#### DIVISION OF COTTON INSECTS

R. W. Harned, B. S. A., Prin. Ent., in charge.1

FIELD LABORATORIES.

Arizona-Tucson:

T. P. Cassidy, B. S., Ent., in charge.

H. C. Young, B. S., Jr. Ent.

W. A. Stevenson, B. S., Jr. Ent.

Louisiana-Tallulah (hdqrs.):

R. C. Gaines, B. S., Ent., in charge.

J. W. Folsom, Sc. B., Sc. D., Sr. Ent.

M. T. Young, B. S., Assoc. Ent.

F. H. Tucker, Sr. Chem.

G. A. Maloney, Asst. Ent.

W. S. Cook, M. A., Asst. Micros.

R. W. Moreland, B. S., Asst. Ent.

K. P. Ewing, B. S., Asst. Ent.

G. L. Smith, B. S., Asst. Ent.

J. C. Pearson, B. S., Jr. Chem.

P. A. Glick, A. B., M. S., Asst. Ent. G. L. Garrison, Sr. Sci. Aid.

South Carolina-Florence:

F. F. Bondy, B. S., Asst. Ent.

## Texas:

Brownsville-

T. C. Barber, B. S., Asst. Ent. Bryan-

E. W. Dunnam, Ph. D., Ent.

El Paso-

F. A. Fenton, M. A., Ph. D., Sr. Ent., in charge.

C. S. Rude, M. S., Asst. Ent.

A. J. Chapman, B. S., Jr. Ent.

## DIVISION OF INSECTS AFFECTING MAN AND ANIMALS

F. C. Bishopp, M. S., Prin. Ent., in charge. Wm. Robinson, B. S. A., M. S., Ph. D., Sr.

J. L. Webb, M. S., Assoc. Ent.

## Insects Affecting Animals.

FIELD LABORATORIES.

Alaska-Nome:

E. C. Cushing, M. S., Asst. Ent.

Illinois-Galesburg:

R. W. Wells, B. A., M. S., Assuc. Ent.

Maryland-Beltsville:

H. S. Peters, M. S., Asst. Ent.

<sup>&</sup>lt;sup>1</sup> Temporarily in Tallulah, La.

Insects Affecting Animals-Continued.

FIELD LABORATORIES-Continued.

North Dakota-Fargo:

W. G. Bruce, M. S., Asst. Ent.

Texas:

Dallas-

E. W. Laake, B. S., Assoc. Ent., in charge.

E. F. Knipling, M. S., Jr. Ent. Menard (branch of Dallas, Tex, lab.)—

H. E. Parish, Agt.

Sonora-

O. G. Babcock, B. S., Asst. Ent.

D. C. Parman, B. S., Assoc. Ent., in charge.R. A. Roberts, M. S., Asst. Ent.

A. W. Lindquist, M. S., Jr. Ent.

## Insects Affecting Man.

FIELD LABORATORIES.

California-Coachella:

R. W. Burgess, Asst. Ent.

G. O. Robertson, Agt.

Florida--Orlando:

W. V. King, B. S., Ph. D., Sr. Ent., in charge.

G. H. Bradley, M. S., Assoc. Ent.

T. E. McNeel, B. S., Jr. Ent.

South Carolina—Charleston:

W. E. Dove, B. S., D. Sc., Ent., in charge.

D. G. Hall, M. S., Assist. Ent. H. O. Schroeder, B. A., M. S., Jr.

## DIVISION OF STORED PRODUCT INSECTS

(Including household insects)

E. A. Back, B. S., Ph. D., Prin. Ent., in charge.

R. T. Cotton, M. S., Ph. D., Sr. Ent. H. B. Bradford, Chief Sci. Illustr. Marion T. Van Horn, Jr. Sci. Aid.

## Grain Insects.

FIELD LABORATORIES.

Ent.

Georgia-Thomasville:

S. E. McClendon, B. S., Asst. Ent. Maryland—Silver Spring:

G. W. Ellington, B. S., Asst. Ent.

#### Flour-Mill Insects.

FIELD LABORATORIES.

Missouri-Kansas City:

Geo. B. Wagner, M. S., Asst. Ent.

Maryland—Silver Spring:

Newell E. Good, A. B., M. S., Asst. Ent.

#### Bean Weevils.

FIELD LABORATORY.

California-Modesto:

C. K. Fisher, B. S., Asst. Ent.

#### Pea Weevil.

FIELD LABORATORIES.

Oregon-Corvallis:

A. O. Larson, M. S., Ent.

F. G. Hinman, B. S., Jr. Ent.

#### Pea Weevil-Continued.

FIELD LABORATORIES-Continued.

Idaho-Moscow:

----, in charge.

#### Dried-Fruit Insects.

FIELD LABORATORY.

California—Fresno:

Perez Simmons, B. S., Ent., in charge.

Dwight F. Barnes, Asst. Ent.

#### Stored Tobacco Insects.

FIELD LABORATORY.

Virginia-Richmond:

W. D. Reed, B. S., Assoc. Ent., in charge.

Erskine B. Livingston, B. S., Jr. Ent.

A. W. Morrill, jr., M. S., Jr. Ent.

#### Household Insects.

FIELD LABORATORY.

Maryland-Silver Spring:

Wallace Colman, A. B., M. S., Assoc. Ent.

#### DIVISION OF BEE CULTURE

Jas. I. Hambleton, B. S., Sr. Apicult., in charge.

#### Behavior of Bees.

W. J. Nolan, A. M., Apicult.

#### Bee Diseases.

C. E. Burnside, M. S., Ph. D., Asst. Apicult.

## Beekeeping Regions.

G. E. Marvin, M. S., Asst. Apicult.

#### Intermountain Bee Culture.

FIELD LABORATORY.

Wyoming-Laramie:

A. P. Sturtevant, A. B., Ph. D., Assoc. Avicult.. in charge.

Assoc. Apicult., in sharge.

J. E. Eckert, M. S., Ph. D., Assoc.
Apicult.

#### Southern States Bee Culture.

FIELD LABORATORY.

Louisiana-Baton Rouge:

Warren Whitcomb, jr., M. S., Ph. D., Asst. Apicult., in charge.

Everett Oertel, B. S., Ph. D., Asst. Apicult.

## Pacific Coast Bee Culture.

FIELD LABORATORY.

California-Davis:

E. L. Sechrist, B. A., Assoc. Apicult.
 Frank E. Todd, B. S., Assoc. Apicult.
 Geo. H. Vansell, M. A., Assoc. Apicult.

## DIVISION OF TAXONOMY OF INSECTS

Harold Morrison, A. M., Sc. D., Sr. Ent., in charge.

Irene L. Bartlett, B. S., Jr. Ent. Catherine Ford, B. S., Jr. Ent.

Kathleen McClure, B. S., Jr. Ent. Louise M. Russell, M. S., Jr. Ent.

W. F. Tastet, Prin. Sci. Aid.

Eleanor T. Armstrong, Sr. Sci. Illustr.
Marjorie H. Ellis, B. A., Sr. Sci. Aid.
Ida Weckerly, A. B., Sr. Sci. Aid.
C. S. Menagh, Sci. Aid.
Francis H. Noyes, Asst. Sci. Illustr.
Mildred E. Shields,\* Asst. Sci. Aid.
Edna E. Sellens, Jr. Sci. Aid.
Janet W. Armstrong, Under Sci. Helper.
Fern R. Bell, A. B., Under Sci. Helper.
Nettie E. Crocker,\* Under Sci. Helper.
Marjorie Ross Jones, A. B., Under Sci.
Helper.

Catherine V. Locke, \* Under Sci. Helper. Nellie D. McConnell, \* Under Sci. Helper. Eunice Myers, Under Sci. Helper. Helen A. Schuoler, B. S., Under Sci. Helper.

#### Coleoptera.

A. G. Böving, B. Ph., M. S., Ph. D., Sr. Ent.

M. W. Blackman, Ph. D., Sr. Ent.E. A. Chapin, Ph. B., M. S., Ph. D., Assoc. Ent.

H. S. Barber, Assoc. Ent. W. S. Fisher, Assoc. Ent.

L. L. Buchanan, B. A., Assoc. Ent.

#### Lepidoptera.

Wm. Schaus. M. A., D. Sc., Ent. Carl Heinrich. Ent. August Busck, Ent.

#### Diptera.

C. T. Greene, Assoc. Ent.

#### Hymenoptera.

A. B. Gahan, M. S., Sr. Ent. R. A. Cushman, Ent. Grace A. Sandhouse, A. M., Asst. Ent.

#### Orthoptera and Neuroptera.

A. N. Caudell. M. S., Ent.

#### Ectoparasites and Mites.

H. E. Ewing, M. A., Ph. D., Assoc. Ent.

#### Coccidae.

Harold Morrison, A. M., Sc. D., Sr. Ent. Grace E. Glance, B. S., Jr. Ent.

# DIVISION OF INSECT TOXICOLOGY AND PHYSIOLOGY

FIELD LABORATORY.

Maryland-Takoma Park:

F. L. Campbell, M. S., D. Sc., Ent., in charge.

N. E. McIndoo, A. M., Ph. D., Sr. Ent.D. E. Fink, M. S., Ph. D., Ent.

J. W. Bulger, M. A., Ph. D., Assoc. Ent.

M. C. Swingle, M. S., Asst. Ent. C. Lukens, A. M., Asst. Biophys.

Abby Holdridge, Asst. Sci. Aid.

#### DIVISION OF INSECT PEST SURVEY

J. A. Hyslop, M. S., Sr. Ent., in charge.

M. P. Jones, M. S., Ent.

P. D. Sanders, M. S., Ent.

F. D. Butcher, A. B., Ent.
 F. M. Wadley, M. S., Ph. D., Assoc. Ent.

G. M. Myers, Sr. Sci. Aid.

#### DIVISION OF BIOCLIMATICS

West Virginia—Mineral Wells (hdqrs.):
A. D. Hopkins, Ph. D., Prin. Ent., in charge.

M. A. Murray, Sr. Sci. Aid.

#### DIVISION OF INSECT PATHOLOGY

G. F. White, B. S., Ph. D., M. D., Sr. Path.

## DIVISION OF INSECT MORPHOLOGY

R. E. Snodgrass, A. B., Sr. Ent.

#### FOOD AND DRUG ADMINISTRATION

W. G. Campbell, A. B., LL. B., Dir. of Regulatory Work, in charge.

P. B. Dunbar, B. S., M. S., Ph. D., Asst. Chief.

F. B. Linton, Asst., to Chief.

S. R. Barber, B. S., Inf. Spec.

L. M. Clarke, Chief Clerk.

Mary T. Read,\* Ed.

Vivian Robb, B. A., Jr. Lib.

### INTERSTATE DIVISION

C. W. Crawford, B. S., M. S., Prin. Chem., in charge.

L. D. Elliott, A. B., Ph. D., Sr. Chem.

G. P. Larrick, Sr. Insp.

A. S. Mitchell, Ph. C., M. S., Sr. Chem. Martin Boyle, B. S., LL. B., Chem. J. G. Shibley, LL. B., Sr. Admin. Off.

#### IMPORT DIVISION

A. E. Taylor, A. B., A. M., Ph. D., Prin. Chem., in charge.

Arthur Stengel, Ph. G., Sr. Admin. Off. R. S. Roe, A. B., Assoc. Chem.

### DIVISION OF COOPERATION

W. S. Frisbie, Ph. B., Prin. Chem., in charge.

#### FOOD CONTROL DIVISION

W. B. White, A. B., Ph. D., Prin. Chem., in charge.

B. G. Hartmann, Ph. D., Sr. Chem.

V. B. Bonney, B. S., Chem.

H. A. Lepper, B. S., Chem.

P. A. Clifford, A. B., M. A., Assoc. Chem.

Fred Hillig, B. S., Assoc. Chem. S. C. Rowe, Ch. E., Assoc. Chem.

J. T. Keister, B. S., M. S., Phar. D., Asst. Chem.

J. I. Palmore, B. S., M. S., Asst. Chem. F A. Vorhes, jr., B. S., Asst. Chem. Gordon Smith, B. S., Jr. Chem.

#### Bacteriological Section.

A. C. Hunter, B. S., M. S., Ph. D., Sr. Bact.

B. A. Linden, Asst. Bact.

Roy Schneiter, B. S., M. S., Jr. Bact. G. G. Slocum, B. A., M. S., Jr. Bact.

L. W. Strasburger, B. S., Jr. Bact.

#### Water and Beverage Section.

J. W. Sale, A. B., A. M., Sr. Chem.
 J. B. Wilson, A. B., Assoc. Chem.

C. H. Badger, B. S., Asst. Chem. Anna E. Mix, Phar. D., Jr. Chem. W. O. Winkler, B. S., Jr. Chem.

#### Cereal Section.

G. L. Bidwell, B. S., Chem. V. E. Munsey, B. S., Asst. Chem.

#### COLOR CERTIFICATION SECTION

H. T. Herrick, A. B., Ch. E., Prin. Chem., in charge.

O. L. Evenson, B. S., A. M., Assoc. Chem.

S. S. Forrest, B. S., Jr. Chem.

J. A. Kime, B. S., Jr. Chem.

#### DRUG CONTROL DIVISION

J. J. Durrett, B. S., M. S., Ph. G., M. D., Chief, Drug Control.

## Chemical Section.

A. G. Murray, A. B., Sr. Chem.

L. E. Warren, Ph. C., B. S., Sr. Chem.

H. Wales, jr., A. B., M. A., Ph. D., Chem. H. R. Watkins, A. B., M. S., Chem.

#### Medical Section.

F. J. Cullen, Ph. G., M. D., Sr. Med. Off.

G. E. Clarke, B. S., M. D., Med. Off.

P. W. Spickard, M. D., Med. Off.

C. E. Holton, M. D., Assoc. Med. Off.

W. F. Galatzo, M. D., Asst. Med. Off.

#### Veterinary Section.

H. E. Moskey, V. M. D., Vet.

Geo. Smith, jr., D. V. M., Assoc. Vet.

O. J. Mayfield, D. V. M., Jr. Vet. San.

Pharmacology Section.

W. T. McClosky, A. B., Sr. Pharmacol. H. T. Lightbody, B. S., M. S., Ph. D., Pharmacol.

P. E. Tullar, A. B., Jr. Pharmacol.

#### Special Collaborative Investigations Section.

W. O. Emery, B. S., Ph. D., Sr. Chem.

W. Norris, A. B., M. D., Med. Off.

V. K. Chesnut, B. S., Assoc. Chem.

C. D. Wright, A. B., A. M., Ph. D., Assoc. Chem.

F. W. Casey, Ph. C., B. S., Asst. Chem.

## MICROANALYTICAL DIVISION

B. J. Howard, B. S., Prin. Micros., in charge.

G. L. Keenan, B. S., A. M., Microan.

J. D. Wildman, A. B., A. M., Asst. Microan. Harold A. Schomer, B. S., M. S., Jr. Microan.

#### INSECTICIDE CONTROL DIVISION

C. C. McDonnell, B. S., Sc. D., Prin. Chem., in charge.

#### Chemical and Bacteriological Section.

W. D. Lynch, B. S., LL. B., Sr. Chem. J. J. T. Graham, B. S., M. S., Sr. Chem.

E. L. Griffin, A. B., B. S., M. S., Ph. D., Sr. Chem.

G. L. A. Ruehle, B. S., M. S., Sr. Bact.

H. H. Custis, A. B., A. M., Ph. D., Chem.

C. M. Brewer, B. S., M. S., Assoc. Bact. W. J. Morgan, B. S., M. S., Assoc. Chem.

A. C. Nothstine, B. S., Assoc. Chem.

C. G. Donovan, B. S., Asst. Chem. F. A. Spurr, B. S., M. S., Asst. Chem. Jack Henry, B. S., Jr. Chem.

#### Plant Pathological Section.

E. Wallace, B. S. A., M. S. A., Ph. D., Sr. Path.

F. P. Schlatter, B. S., Path. FIELD HEADQUARTERS.

New Jersey-Haddon Heights:

D. P. Perry, B. S., Assoc. Path. Oregon-Corvallis:

F. D. Bailey, A. B., A. M., Assoc. Path.

#### Animal Pathological Section.

G. C. Roe, A. B., M. S., Assoc. Zool.

#### Entomological Section.

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W. M. Davidson, B. S., Assoc. Ent.

G. D. Reynolds, B. S., Asst. Ent.

S. C. Billings, B. S., Jr. Ent.

New Jersey-Haddon Heights:

L. J. Bottimer, B. S., Asst. Ent.

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V. E. Grotlisch, Ch. E., Naval Stores Classifier.

B. A. Brice, B. A., M. A., Ph. D., Assoc. Phys.

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## Georgia-Savannah:

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Georgia-Waycross:

F. W. Thomas, Asst. Naval Stores Classifier.

Louisiana-DeRidder:

G. A. Berry, Asst. Naval Stores Classifier.

## Mississippi-Gulfport:

R. L. Helveston, Asst. Naval Stores Classifier.

## New York-New York:

C. E. Smith, Assoc. Naval Stores Classifier.

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C. O. Dodge, B. S., Asst. Chief.

A. E. Lowe, Asst. to Chief.

C. A. Herrmann, A. B., Chem. STATIONS.

Georgia-Savannah:

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Dan Dahle, Ch. E., Asst. Chem.

H. I. Macomber, B. S., Asst. Chem.

W. H. Simms, B. S., Sr. Insp.

L. A. Smith, Phar. D., Chief Insp. F. B. McAuliffe, Insp.

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E. H. Grant, B. S., Assoc. Chem.

T. N. Bennett, B. S., Asst. Chem.

W. C. Woodfin, B. S., Asst. Chem.

R. L. Herd, B. S., M. S., Jr. Chem.

E. M. Hoshall, B. Sc., Jr. Chem. Engr.

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L. L. Judge, Sr. Insp.

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McKay McKinnon, Jr., B. S., Jr. Insp.

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H. W. Haynes, B. S., Asst. Chem.

C. H. Hickey, B. S., Asst. Chem.

P. L. Leavitt, B. S., M. S., Asst. Chem.

C. C. Sullivan, B. S., Chief Insp.

F. T. Bestwick, Sr. Insp.

C. A. Wood, Sr. Insp.

H. P. Cragin, B. Ch. E., Jr. Insp.

A. E. Ledder, B. S., Jr. Insp.

E. C. Griswold, Tea Exam.

New York:

Buffalo-

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W. H. Heath, B. S., Chem.

L. W. Ferris, A. B., Assoc. Chem.

M. M. Jackson, B. S., Asst. Chem.

W. C. Miller, Sr. Insp.

E. L. Palmer, Sr. Insp.

J. T. Cain, A. B., Insp.

J. K. Kirk, B. S., Jr. Insp.

New York-

Joseph Callaway, Jr., B. S., M. S., Chief of Sta.

J. A. Cummings, A. B., Chem.

H. D. Grigsby, B. S., Chem.

G. C. Swan, A. B., A. M., Chem.

E. L. Anderson, A. B., Assoc. Chem.

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Eastern District-Continued. STATIONS-Continued.

New York-Continued.

New York-Continued.

J. C. Bubb, A. B., Assoc. Chem.

R. L. Horst, A. B., M. S., Assoc. Chem.

C. F. Jablonski, B. S., Assoc. Chem.

W. E. Kirby, B. S., A. M., Assoc.

Abraham Chuckrow, B. S., Asst. Chem.

J. F. Clevenger, B. S., A. M., Asst. Plant Hist.

Jacob Fitelson, B. S., Asst. Chem. Marie L. Offutt, B. S., A. M., Asst. Chem.

J. A. Reilly, B. S., M. S., Asst. Chem.

D. B. Scott, A. B., A. M., Asst. Chem.

B. B. Wright, B. S., Asst. Chem.

A. M. Allison, B. S., Jr. Chem. Abraham Alter, B. S., M. A., Jr. Chem.

J. S. Ard, B. S., Jr. Chem.

J. A. Batscha, A. B., Jr. Chem.

S. M. Berman, B. A., Jr. Chem.

C. F. Bruening, B. S., Jr. Chem.

C. F. Cressy, B. S., Jr. Chem. I. A. Gaines, Jr., A. B., M. S., Jr. Chem.

W. M. Goldberg, B. S., Jr. Chem. E. C. Haas, B. S., M. S., Jr. Chem.

M. L. Hitchcock, B. S., Jr. Chem. J. L. Hogan, A. B., A. M., Jr.

Rupert Hyatt, A. B., M. S., Jr. Chem.

Chem.

F. B. Jones, B. S., E. M., Jr. Chem.

O. C. Kenworthy, B. S., M. S., Jr. Chem.

Gardner Kirsten, B. S., Jr. Chem. J. H. C. Loughrey, A. B., A. M., Jr. Chem.

W. L. Miller, B. A., Jr. Chem.

Solomon Reznek, B. S., Jr. Chem. Harry Rogavitz, B. C., Jr. Chem.

C. D. Schiffman, B. S., Jr. Chem. F. C. Sinton, B. S., Jr. Chem.

Olaf Olsen, Prin. Insp.

M. L. Gingell, Asst. Insp.

F. H. Gray, Sr. Insp.

Chas. Hyak, jr., B. S., Sr. Insp.

P. A. Jackman, Sr. Insp.

C. F. J. O'Neill, Sr. Insp.

A. T. Retzlaff, B. A., Asst. Insp. S. E. Schoonover, B. S., Insp.

C. B. Sullivan, B. S., Insp.

J. H. Bachelder, B. S., Jr. Insp.

J. S. Faries, A. B., Jr. Insp.

C. L. Greenlee, B. S., Jr. Insp.

M. O. Rentz, B. S., Jr. Insp.

G. W. Rynerson, B. S., Jr. Insp.

Eastern District-Continued.

STATIONS-Continued.

New York-Continued.

New York-Continued.

C. F. Hutchinson, Chief Tea Exam.

Rouses Point :

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W. R. North, B. S., Jr. Bact.

Morris Ostrolenk, B. S., Jr. Bact. C. W. Gates, D. V. M., Jr. Vet. San.

Pennsylvania-Philadelphia:

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A. M. Henry, B. S., Chem.

D. W. McLaren, B. S., M. S., Asst. Chem.

Harry Shuman, B. Ch. E., Jr. Chem.

L. L. Lusby, Chief Insp.

C. T. Smith, Insp.

G. W. Sooy, B. S., Insp.

R. C. Stanfill, A. B., Insp.

Porto Rico-San Juan:

W. J. McGee, B. S., Chief of Sta.

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J. O. Clarke, B. S., Chief of Dist.

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H. H. Walters, Asst. to Chief.

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C. K. Glycart, B. S., Chem.

J. H. Bornmann, B. S., M. S., Assoc.

L. C. Mitchell, B. S., Assoc. Chem. Maurice Harris, B. S., Asst. Chem.

W. F. Kunke, B. S., Asst. Chem.

F. J. McNall, B. S., Asst. Chem.

C. A. Roach, B. S., Asst. Chem.

H. R. Bond, B. S., Jr. Chem.

J. H. Cannon, A. B., Jr. Chem. Jonas Carol, B. S., M. S., Jr. Chem.

W. E. Hillyer, B. S., M. S., LL. B., Jr. Chem.
R. Moberg, D. V. M., Jr. Vet.

Sanitarian.

I. S. Shupe, A. B., Jr. Chem.

W. B. Simmons, Insp.

Robert Young, Chief Insp.

Frank Hackman, Sr. Insp.

J. T. Sullivan, Sr. Insp.

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Artemas Brown, M. D., Insp.

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B. L. Eggerton, B. S., Jr. Insp.

W. A. Ernst, B. A., Insp.

V. F. LaPiana, B. S., Insp.

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Louisiana-New Orleans:

E. C. Boudreaux, A. B., Chief of Sta.

N. E. Freeman, B. S., Asst. Chem.

Central District-Continued.

STATIONS-Continued.

Louisiana-New Orleans-Continued. M. J. Gnagy, B. S., M. S., Asst.

Chem.

E. C. Deal, A. B., Ph. G., Ph. C., Jr. Chem.

S. B. Falck, B. S., Jr. Chem.

H. S. Haller, B. S., Jr. Chem. G. H. Eigenberger, Chief Insp.

J. Y. Breckenridge, Phar. B., Sr. Insp.

F. C. Usher, Ph. G., B. S., Jr. Insp.

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C. B. Stone, A. B., A. M., Assoc.

S. M. Stark, jr., B. S., M. S., Jr. Chem.

J. C. O'Toole, Sr. Insp.

W. B. Tiedt, Sr. Insp.

Missouri:

Kansas City-

W. H. Hartigan, Ph. C., Chief of Sta.

Llewelyn Jones, A. B., Asst. Chem.

A. G. Buell, B. S., *Jr. Chem.*A. W. Garrett, LL. B., *Sr. Insp.*C. C. Curry, B. S., *Jr. Insp.* 

St. Louis-

E. R. Smith, Ph. C., LL. B., Chief of Sta.

Samuel Alfend, B. S., Assoc. Chem. F. L. Hart, A. B., A. M., Assoc.

Chem. J. P. Aumer, B. S., Asst. Chem.

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N. L. Knight, A. A., B. S., Jr. Chem.

R. D. Stanley, B. A., Jr. Chem.

J. L. Ahern, Sr. Insp.

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Ohio-Cincinnati:

S. A. Postle, Chief of Sta.

W. J. McCarthy, B. S., Chem. O. S. Keener, B. S., Asst. Chem.

E. O. Haenni, A. B., M. S., Jr. Chem.

W. T. Ford, Ph. G., Chief Insp.

S. W. Ahlmann, Asst. Insp.

M. O. Bourne, Sr. Insp.

C. A. Clark, B. S., Jr., Insp.

C. S. McKellogg, A. B., M. S., Jr. Insp.

R. S. Pruitt, B. S., Jr. Chem.

Western District (Hdqrs., San Francisco, Calif.).

Wendell Vincent, A. B., Chief of Dis. P. B. Clark, Phar. C., Assoc. Chem.

J. L. Harvey, Sr. Insp.

Western District-Continued.

STATIONS.

California:

Los Angeles-

A. W. Hansen, Ph. B., M. S., Chief of Sta.

L. H. Chernoff, Ph. B., Ph. D., Assoc. Chem.

J. B. Kathe, Phar. C., Chief Insp. B. C. Winslow, A. B., B. S., M. S.,

Chief Insp.

R. B. Born, B. S., Sr. Insp.

W. C. Taber, A. B., M. S., Asst. Chem.

T. O. Kellems, B. S., M. S., Jr. Chem.

San Francisco-

G. J. Morton, Ph. G., B. S., Chief of Sta.

H. J. Wichmann, A. B., A. M., Chem.

E. O. Eaton, Phar. C., Assoc. Chem.

Ray Powers, B. S., Assoc. Chem. R. T. Elliott, B. S., Asst. Chem. Rosewell Jinkins, B. S., M. S., Asst. Chem.

L. H. McRoberts, B. S., M. S., Asst. Chem.

A. E. Plumb, B. S., Asst. Chem.
A. H. Wells, A. B., Asst. Chem.
Richard Edge, B. S., M. A., Jr.
Chem.

L. A. Salinger, LL. B., Jr. Chem.

Western District-Continued.

STATIONS-Continued.

California—Continued.

San Francisco—Continued.

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F. P. Hamill, A. B., Sr. Insp.

G. R. Wood, B. S., Jr. Insp.

L. G. Triebel, Tea Exam.

Colorado-Denver:

J. E. Kimlel, Phar. C., Ph. G., Acting Chief of Sta.

T. C. Dunn, B. S., Asst. Chem.
Leonard Feldstein, B. S., Asst. Chem.
Robert Bonnar, B. S., M. S., Jr.
Chem.

G. T. Daughters, B. S., Jr. Chem. K. E. Monfore, A. B., Insp.

K. E. Monfore, A. B., Insp. Washington—Seattle:

H. C. Moore, Phar. G., Acting Chief of Sta.

J. C. Palmer, B. S., Phar. C., Assoc. Chem.

H. A. Reed, B. S., M. S., Asst. Chem.

A. K. Klein, B. S., Jr. Chem.

P. A. Mills, B. S., Jr. Chem.

A. J. Brown, Phar. D., A. B., Sr. Insp.

E. A. Gray, B. S., Sr. Insp.

J. J. Shearer, Sr. Insp.

F. W. Shultz, B. S., Jr. Insp.

L. G. Fenton, Tea Exam.

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O. A. Zimmerli, Asst. (Claims).
J. H. Kerrick, Accounting.
Walter F. Oakes, Costs.
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Blanche A. Judson, Personnel Clerk.

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Supply Depot, Ogden, Utah. Frank Haynie, Supply Officer.

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#### BRANCH OF GRAZING

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Clarke F. Hunn, B. A., Ed. Willa Dial\*, B. A., Asst. Ed.

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A. H. Pierson, B. A., For. Exam.

## Forest Taxation Inquiry.

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R. Clifford Hall, B. S., M. F., Prin. For.P. A. Herbert, B. S., M. F., Sr. For. Econ.

L. S. Murphy, B. S., M. F., Sr. For. Econ. Paul W. Wager, B. S., M. A., Ph. D., Taxation Econ.

Wade E. DeVries, B. A., M. A., Taxation Econ.

Besse B. Day, B. S., M. A., Assoc. Statis. Daniel Pingree, B. S., M. F., Asst. For. Econ.

Roy B. Thomson, D. S., M. F., Asst. For. Econ.

#### Forest Survey.

C. M. Granger, B. S., Head For. Econ., Dir.

F. J. Hallaur, C. E., Prin. Engr.

J. W. Girard, Log. Engr.

FOREST AND RANGE EXPERIMENT STATIONS

Arizona—Tucson (Southwestern Forest and Range Sta., in coop. with Univ. of Arizona):

G. A. Pearson, B. S., M. A., Dir.

Silviculture:

G. A. Pearson, Sr. Silv., in charge. Hermann Krauch, B. S., Assoc. Silv. E. M. Hornibrook, B. S., Jr. For.

Range Research:

C. K. Cooperrider, B. S., Sr. Range Exam., in charge.

Matt J. Culley, Assoc. Range Exam.

R. S. Campbell, A. B., S. M., Assoc. For. Ecol.

B. A. Hendricks, B. S., Assoc. Range Exam.

H. O. Cassidy, B. S., Assoc. Range Exam.

Arizona-Tucson-Continued.

Range Research-Continued.

Paul B. Lister, B. S., M. S., Asst. For. Ecol.

R. H. Canfield, B. S. F., M. F., Jr. Range Exam.

E. Shirley Bliss, B. S., Jr. Range Exam.

#### Erosion:

C. K. Cooperrider, B. S., in charge.

California—Berkeley (California Sta., in coop. with Univ. of Calif.):

E. I. Kotok, B. A., M. S., Dir.

#### Silviculture:

Duncan Dunning, B. A., M. S., Silv., in charge.

L. H. Reineke, B. S., Asst. For.

A. A. Hasel, B. S., Asst. Silv.

V. A. Clements, B. S., Asst. Silv.

## Redwood Region:

H. L. Person, B. S., M. S., Asso. Silv.

Forest Influences and Erosion:
W. C. Lowdermilk, B. S., M. A., Ph. D.,
Sr. Silv., in charge.

Charles J. Kraebel, M. S. F., Sr. Silv. Hugo L. Sundling, B. S., M. S., Asst. Silv.

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C. L. Hill, A. B., M. S. F., Sr. For., in charge.

M. R. Brundage, B. S., Assoc. For.

Ira J. Mason, B. S., Asst. For.

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A. E. Wieslander, B. A., M. S. F., Assoc. Silv., in charge.

## Fire:

George M. Gowen, B. S., Silv., in charge.

John R. Curry, B. S., Assoc. Silv.

A. A. Brown, B. S., Assoc. Silv.

Colorado—Colorado Springs (Rocky Mountain Sta.):

J. Roeser, jr., F. E., Asst. Silv.

Louisiana—New Orleans (Southern Sta.):
E. L. Demmon, A. B., M. S. F., *Director*.
Silviculture:

E. L. Demmon, in charge.

Lenthall Wyman, B. A., M. F., Assoc. Silv.

W. G. Wahlenberg, B. S., M. F., Assoc. Silv.

L. J. Pessin, B. S., Ph. D., Assoc. For. Ecol.

P. C. Wakeley, B. S., M. F., Assoc. Silv.

V. L. Harper, B. S., M. F., Asst. Silv.J. L. Averell, B. S., M. F., Asst. Silv.

J. L. Averell, B. S., M. F., Asst. Silv.
R. K. Winters, B. S., M. S. F., Ph. D.,
Asst. Silv.

Henry Bull, B. S., M. F., Asst. Silv.

E. W. Gemmer, B. S., M. F., Asst. Silv.

Roy A. Chapman, B. S., Jr. For.

Frank Heyward, B. S., M. F., Jr. For. Carl Fred Olsen, B. S., M. F., Jr. For.

Louisiana-New Orleans-Continued.

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R. R. Reynolds, B. S., M. S. F., Jr. For. Forest Survey:
G. H. Lentz, Ph. B., M. F., Silv., in

charge. Mark M. Lehrbas, B. S., Asst. For.

Econ.

J. W. Cruikshank, B. S., Jr. For.

P. R. Wheeler, B. S., M. S. F., Jr. For. Soil Erosion:

J. D. Sinclair, B. S., M. S., Asst. For. Ecol.

H. G. Meginnis, B. S., M. S. F., Jr. For.

Massachusetts—Amherst (Northeastern Station, in coop. with Mass, State College):

C. Edward Behre, Ph. B., M. F., Dir.

M. Westveld, B. S., M. F., Silv.

P. W. Stickel, B. S., M. F., Assoc. Silv. V. S. Jensen, B. S., M. F., Asst. Silv. Minnesota:

Cloquet (Cloquet Sta., in coop. with Lake States Sta.):

T. Shantz Hansen, B. S., M. F., Asst., in charge.

Roscommon, Mich. (Michigan Fire Station), in coop. with Mich. Dept. of Cons.—

G. I. Stewart, B. S., M. F., in charge. St. Paul (Lake States Sta.), in coop. with Univ. of Minn.—

Raphael Zon, A. B., B. S., F. E., Dir. Silviculture:

Raphael Zon, in charge.

C. G. Bates, B. S., Sr. Silv.

Joseph Kittredge, jr., A. B., M. F., Sr. Silv.

J. A. Mitchell, B. S., M. F., Silv.

F. H. Eyre, B. S., Silv.

H. L. Shirley, A. B., Ph. D., Assoc. Silv.S. R. Gevorkiantz, B. S., M. F., Asst. Silv.

E. L. Mowat, B. S., M. F., Jr. For.

H. F. Scholz, B. S., Jr. For.

E. I. Roe, B. S., Jr. For.

P. O. Rudolph, B. S., Jr. For.

John R. Neetzel, B. S., M. F., Jr. For. Forest Survey:

R. N. Cunningham, B. S., For Econ., in charge.

Montana—Missoula (Northern Rocky Mountain Sta.):

R. H. Weidman, A. B., Sr. Silv., in charge. H. T. Gisborne, B. S. F., Silv.

I. T. Haig, B. S. F., M. F., Assoc. Silv. North Carolina—Asheville (Appalachian

Sta.):

Earl H. Frothingham, A. B., M. S. F., Dir.

Chas. R. Hursh, A. B., M. S., Ph. D., For. Ecol.

North Carolina—Asheville—Continued. Leonard I. Barrett, B. S. F., M. S., Ph. D., For. Ecol.

Jesse H. Buell, A. B., M. F., Asst. Silv. Ivan H. Sims, B. S. F., M. S. F., Asst.

A. L. MacKinney, B. S., M. F., Asst. Silv. Chas. A. Abell, B. S., M. F., Jr. For. Margaret C. Stoughton, B. S., Jr. For.

Ohio-Columbus (Central States Sta.):

E. F. McCarthy, B. S., M. S. F., Dir.J. T. Auten, B. S., M. S., Ph. D., Silv.

L. F. Kellogg, B. S., M. F., Assoc. Silv.

R. K. Day, B. S., Asst. Silv.

Oregon—Portland (Pacific Northwest Sta.):
Thornton T. Munger, B. A., M. F., *Dir.*Silverculture:

Thornton T. Munger, in charge. Walter H. Meyer, A. B., M. F., Ph. D., Assoc. Silv.

L. A. Isaac, B. S. F., Asst. Silv.

R. E. McArdle, B. S., M. F., Ph. D., Assoc. Silv.

E. L. Kolbe, B. S., M. F., Jr. For.

Survey:

Horace J. Andrews, A. B., M. S. F., in charge.

Donald N. Matthews, B. S., M. F., Asst. For.

W. H. Bolles, B. S., M. F., Asst. For.E. D. Buell, B. S., Jr. For.

R. W. Cowlin, B. S., M. S., Assoc. For. Econ.

Paul D. Kemp, B. S., M. F., Asst. For. C. W. Kline, B. S., Timber Expert. Floyd L. Moravets, B. S. F., Jr. For. Percy N. Fratt, Timber Expert.

Wm. J. Wakeman, B. S., Timber Expert.

Insurance:

H. B. Shepard. B. S., M. F., Sr. For. Econ.

Economics:

A. J. F. Brandstrom, B. S. F., Sr. For. Econ.

Burt P. Kirkland, A. B., Pri. For. Econ.

Products:

Herman M. Johnson, B. S., M. S. F., Asst. For.

E. F. Rapraeger, B. S. F., Jr. For. Howard Spelman, B. S., M. F., Asst. For.

Pennsylvania—Philadelphia (Allegheny Sta.):

R. D. Forbes, B. A., M. F., Dir.

A. B. Hatch, B. S., M. F., Asst. Silv.

G. L. Schnur, A. B., M. F., Asst. Silv.
 A. F. Hough, B. S., M. F., Asst. Silv.

O. M. Wood, B. A., M. S., M. F., Asst.

H. F. Morey, B. S., Jr. For.

Utah—Ogden (Intermountain Forest and Range Sta.):

C. L. Forsling, B. S., Dir.

Range Research:

George Stewart, Ph. D., Sr. For. Ecol.

Utah-Ogden-Continued.

Range Research-Continued.

Enoch W. Nelson, B. S., A. M., Assoc. Range Exam.

G. W. Craddock, Jr., B. S., M. F., Asst. Range Exam.

G. D. Pickford, B. S., Asst. Silv.

Erosion:

F. G. Renner, B. S., Assoc. Range

T. Kenneth Pearse, B. S., Jr. Range Exam.

Silviculture:

L. F. Watts, B. S., M. F., Sr. Silv. C. A. Connaughton, B. S., Jr. For.

FOREST PRODUCTS LABORATORY, MADISON, WIS.

Carlile P. Winslow, Ph. B., Dir. I. F. Hawley, Ph. D., Prin. Chem. II. D. Tiemann, M. E., M. F., Sr. Phys. Publication of Results:

E. F. White, M. F., Sr. For., in charge. W. W. Weber, M. S. F., For. Asst.

D. G. Coleman, A. B., Sr. Tech. Reviewer.

H. H. Ketcham, E. E., Tech. Reviewer.

F. J. Champion, Asst. Tech. Writer.

T. J. Mosley, M. A., Sr. Tech. Reviewer. Derived Products:

E. C. Sherrard, Ph. D., Prin. Chem., in charge.

E. Bateman, Ph. B., Sr. Chem.R. H. Baechler, Ph. D., Asst. Chem.

E. Beglinger, Jr. Chem.E. E. Harris, Ph. D., Assoc. Chem.

J. P. Hohf, A. B., Jr. Chem. E. F. Kurth, M. S., Jr. Chem.

R. M. Mitchell, A. B., Jr. Chem.

G. J. Ritter, Ph. D., Chem.

R. M. Seborg, B. S., Jr. Chem.

A. J. Stamm, Ph. D., Chem. Pulp and Paper:

C. E. Curran, Ph. D., Prin. Chem., in charge.

P. K. Baird, M. A., Sr. Chem.

P. S. Billington, A. B., Jr. Chem. M. W. Bray, M. S., Chem.

G. H. Chidester, B. S., Assoc. Engr.

W. A. Chilson, B. C. E., Engr.

R. H. Doughty, M. S., Asst. Engr.

M. Heinig, M. A., Jr. Chem.

C. C. Heritage, B. S., Prin. Engr., consultant.

C. E. Hrubesky, M. S., Asst. Chem.

E. L. Keller, B. S., Jr. Chem.

J. S. Martin, B. S., Asst. Engr.

J. N. McGovern, M. S., Jr. Tech. J. C. Pew, M. S., Asst. Engr.

E. R. Schafer, B. S., Assoc. Engr.

S. L. Schwartz, B. S., Jr. Engr. C. O. Seborg, B. S., Jr. Chem.

F. A. Simmonds, B. S., Assoc. Chem. Timber Mechanics:

J. A. Newlin, B. S., Prin. Engr., in charge.

L. J. Markwardt, C. E., Sr. Engr., assistant.

Timber Mechanics-Continued.

T. A. Carlson, M. S., Assoc. Engr.

J. M. Gahagan, Asst. Engr.

G. E. Heck, M. S., Engr.

R. F. Luxford, C. E., Assoc. Engr. H. W. March, Ph. D., Con. Spec. Math.

C. A. Plaskett, C. E., Sr. Engr. R. J. Roark, M. S., Sr. Engr., consultant.

J. A. Scholten, B. S., Jr. Agr. Engr.

G. W. Trayer, C. E., Sr. Engr. T. R. C. Wilson, C. E., Sr. Engr.

Timber Physics:

Rolf Thelen, B. S., Prin. Engr., in charge.

J. S. Mathewson, M. E., Sr. Engr., assist-

M. E. Dunlap, B. S., Sr. Engr.

W. K. Loughborough, Engr.

E. C. Peck, M. F., Assoc. Wood Technol.

R. C. Rietz, B. A., Asst. Engr.

L. V. Teesdale, Sr. Engr.

O. W. Torgeson, B. S., Assoc. Engr.

Silvicultural Relations:

Arthur Koehler, M. S., Sr. Xylotomist, in charge.

Eloise Gerry, Ph. D., Sr. Micros.

B. H. Paul, M. F., Silv.

R. O. Marts, M. S., Asst. Phys. Plant Anatomist.

M. Y. Pillow, B. S., Asst. Wood Technol. Gertrude Griffin, Jr. Xylotomist.

J. Alfred Hall, M. S. Biochemist.

Wood Preservation:

George M. Hunt, B. S., Prin. Chem. in charge.

T. R. Truax, M. S., Sr. Wood Technol., asst.

D. Brouse, M. S., Asst. Engr.

F. L. Browne, Ph. D., Sr. Chem.

L. E. Downs, B. S., Asst. Engr.

C. A. Harrison, Jr. Engr.

J. D. MacLean, Ph. D., Sr. Engr.

R. M. Wirka, B. S., Assoc. Engr.

Industrial Investigations:

C. V. Sweet, M. F., Prin. Engr., in charge.

R. D. Garver, B. S., Sr. For., asst.

A. O. Benson, B. S., Wood Technol.

J. B. Cuno, M. F., Assoc. Wood Technol.

E. M. Davis, M. F., Wood Technol.

R. P. A. Johnson, M. S., Eng.

R. Miller, B. S., Assoc. Engr.

G. C. Morbeck, M. F., Assoc. Wood Technol.

C. J. Telford, M. F., Exten. For.

Pathology (in coop. with Bur. of Pl. Ind.): C. Audrey Richards, Ph. D., Path., in

charge.

Ira Hatfield, M. S., Agt., Asst.

Caroline T. Rumbold, Ph. D., Assoc. Path.

Laboratory Operation:

A. L. Heim, B. S., Sr. Engr., in charge.

C. P. Juckem, Sr. Admin. Asst., asst.

J. A. White, Photographer.

Ellen A. Hoffman, Chief Libr. Asst.

B. L. Nelson, B. A., Assoc. Engr.

Finance and Accounts:

W. E. Thompson, A. B., Fiscal Agt., in charge.

S. H. Busch, LL. B., Dep. Fiscal Agt.

#### BRANCH OF ENGINEERING

T. W. Norcross, B. S. (C. E.), Chief Engr., in charge.

G. H. Lautz, B. S. (C. E.), Asst. Chief Engr.

Jack B. Haile, B. S. (C. E.), Engr.

Howard R. Jones, B. S. (C. E.), Assoc. Engr.

#### Maps and Surveys.

G. H. Lautz, B. S. (C. E.), Asst. Chief Engr., in charge.

Howard R. Jones, B. S. (C. E.), Assoc. Engr., in charge of Surveys.

Helen B. Smith, Asst. and in charge of Map Reproductions.

J. M. Witherow, Chief Drft.

E. S. Shipp, Chief Photographer.

G. B. Bruce, in charge of Atlas records.

T. W. Norcross, B. S. (C. E.), Chief Engr. G. H. Lautz, B. S. (C. E.), Asst. Chief Enar.

Jack B. Haile, B. S. (C. E.), Asst. Engr.

#### Water Power.

T. W. Norcross, B. S. (C. E.), Chief Engr.

## BRANCH OF PUBLIC RELATIONS

Fred Morrell, B. S., M. F., Asst. For., in charge.

## Special Assignments.

Herbert A. Smith, B. A., Ph. D., Asst. For.

### Cooperation with Timberland Owners.

Austin Cary, M. A., Sc. D., Log, Engr.

#### Division of State Cooperation.

A. B. Hastings, A. B., M. F., For. Insp., in charge.

Catherine M. O'Donnell, LL. B., Law Compiler.

C. R. Tillotson, B. S., Dist. For. Inspr. G. T. Backus, F. E., Dist. For. Insp.

C. F. Evans, B. A., M. F., Dist. For. Insp. H. B. Eberly, B. S., Dist. For. Insp.

E. M. Brunner, M. A., M. F., Dist. For. Insp.

H. N. Wheeler, M. A., Lecturer.

## Farm Forestry.

W. R. Mattoon, A. B., M. F., Ext. For.

## Division of Information.

George A. Duthie, A. B., M. S. F. For. Insp., in charge.

C. E. Randall A. B., M. A., Ed. in charge of Educational Coop.

Roy E. Miller, B. J., Press Infor.

D. Priscilla Edgerton, Asst. Ed. Beryl G. Gardner, Asst. Ed.

Marie F. Heisley, \* Asst. in Infor. Bernice M. Geddes, Asst. in Infor.

Jean Kerr, M. A., Ed., For. Worker.

#### Division of Information-Continued.

C. M. Ballard, Chief of Pub.

H. R. Kylie, in charge of Visual Education.

## REGION 1-Northern Region

Montana, northeastern Washington, northern Idaho, and northwestern South Dakota (hdqrs., Missoula, Mont.).

Evan W. Kelley, Reg. For.

#### Public Relations.

Richard F. Hammatt, B. S. F., Asst. Reg. For.

K. D. Swan, B. S., M. F., Asst. Reg. For. Insp.

## Finance and Accounts.

O. M. Wold, Reg. Fiscal Agt.

L. Beaman, Dep. Reg. Fiscal Agt.

#### Operation.

L. C. Stockdale, Asst. Reg. For. G. I. Porter, Admin. Asst.

Fire Protection.

Howard R. Flint, Insp.

Frank J. Jefferson, Insp.

Transportation Study.

Lloyd G. Hornby, A. B., M. S. F., Insp. H. R. Richards, B. S., Tech. Asst.

Improvements.

C. P. Fickes, Insp.

Law Enforcement.

P. J. O'Brien, LL. B., Insp.

#### Training.

Wilfred W. White, M. S., M. S. F., Insp. Administrative Studies.

John B. Taylor, A. B., M. F., Insp.

State Cooperative Fire Protection under Clarke-McNary Act.

C. K. McHarg, Ph. B., M. F., Insp.

Maintenance.

O. C. Bradeen, Purchasing Agt. in charge.

## Forest Management.

Elers Koch, B. S., M. F., Asst. Reg. For. Logging Engineering.

Phillip Neff, Dist. Log. Engr.

Timber Surveys.

R. J. Smith, M. S. F., Chief of Party. J. C. DeJarnette, B. S. F., Tech. Asst.

E. J. Jost, B. S. F., Jr. For.

A. B. Bowman, B. S. F., Jr. For.

C. W. Bloom, B. S. F., Jr. For.

Planting (Haugan, Mont.).

D. S. Olson, in charge.

Wm. B. Apgar, B. S., M. F., in charge, Savenac Nursery.

Forest Insect Investigations (Coeur d'Alene, Idaho).

J. C. Evenden, Ent.

#### Forest Products.

M. Bradner B. S. F., in charge.

I. V. Anderson, B. S. F., Asst.

C. N. Whitney, Ph. B., M. F., Tech. Asst.

### Range Management.

Glen A. Smith, Asst. Reg. For.

Thomas Lommasson, B. S. F., Admin. Asst.

Range Management—Continued.

K. D. Flock, B. S., Chief of Party.

Barry Park, B. S., Chief of Party.

Lands.

M. H. Wolff, Ph. B., M. F., Asst. Rey. For.

Land Exchange and Acquisitions.H. G. Ade, B. S. F., Insp.F. K. Stewart, Chief Surv.Claims.

C. A. McElroy, Chief Mineral Exam.

Engineering.

F. E. Thieme, B. S. (C. E.), Reg. Engr. Maps and Surveys.

J. B. Yule, Asst. Reg. Engr. Frank J. Cool, Chief Drft.

H. A. Calkins, Asst. Reg. Engr.
 Richard P. Hilleary, Chief Surv.
 George W. Duncan, Supt. Const.
 W. P. Stephenson, Chief Surv.

Water Power.

Harold Townsend, Chief Surv.

National Forests.

Idaho:

('learwater (hdqrs., Orofino, Idaho)—Paul A. Wohlen, Super.

Paul H. Gerrard, B. S. F., Asst. Supvr.

L. F. Jefferson, Asst. Supvr. George C. Earle, Chief Lumberman. J. N. Diehl, B. S. F., Ranger.

R. L. Space, B. S., M. E., Ranger. Coeur d'Alene (hdqrs., Coeur d'Alene, Idaho)—

Charles D. Simpson, B. S., Supvr. S. C. Sanderson, Asst. Supvr. Howard Drake, Log. Engr. Thomas Crossley, Chief Lumberman.

H. H. Gurley, B. S. F., Tech. Asst. Nezperce (hdqrs., Grangeville, Idaho)— R. A. Phillips, Supvr. Guy M. Brandborg, Asst. Supvr.

C. D. Blake, Asst. Supvr.
Pend Oreille (hdqrs., Sandpoint,
Idaho)—

Ray R. Fitting, Supvr.
A. N. Cochrell, Asst. Supvr.

Selway (hdqrs., Kooskia, Idaho)— J. F. Brooks, B. S. F., Supvr. Chas. A. MacGregor, Asst. Supvr. J. C. Urquhart, Asst. Supvr.

St. Joe (hdqrs., St. Maries, Idaho)—
Eldon H. Myrick, Supvr.
W. P. Hillman, Asst. Supvr.

Frank Foltz, B. S. F., Asst. Supvr.
Montana:

Absaroka (hdqrs., Livingston, Mont.)—G. E. Martin, Supvr.

Wm. M. Rush, Asst. Supvr. A. Cramer, B. S., Tech. Asst.

K. P. Davis, B. S. F., Ranger.E. A. Schilling, B. S., Ranger.

C. V. Rubottom, B. S., Ranger.
Beartooth (hdqrs., Billings, Mont.)—

R. Trevor Ferguson, B. S., Supvr.

National Forests-Continued.

Montana-Continued.

Beaverhead (hdqrs., Dillon, Mont.)— Alva A. Simpson, Supvr. Earl D. Sandvig, B. S., Asst. Supvr. R. J. Bowers, B. S. F., Ranger.

Bitterroot (hdqrs., Hamilton, Mont.)—
John W. Lowell, Supvr.

A. C. Adams, Asst. Supvr. R. E. Tennant, B. S. F., Ranger. Clarence Spaulding, B. S., Ranger.

Blackfeet (hdqrs., Kalispell, Mont.)— W. M. Nagel, B. S. F., Supvr. Adolph Weholt, Asst. Supvr. Ralph S. Space, B. S. F., Ranger.

Cabinet (hdqrs., Thompson Falls, Mont.)—

Arthur H. Abbott, Supvr. J. H. Bosworth, Asst. Supvr.

Custer (hdqrs., Miles City, Mont.)—
E. W. Hartwell, B. S. F., M. F.,
Tech. Asst.

Deerlodge (hdqrs., Butte, Mont.)— J. N. Templer, Asst. Supvr.

H. G. Peterson, B. S. F., Ranger. J. T. Marsh, B. S. F., Ranger.

Flathead (hdqrs., Kalispell, Mont.)— K. Wolfe, B. S., Supvr. C. J. Hash, Asst. Supvr.

W. I. White, B. S. F., Asst. Supvr. Gallatin (hdqrs., Bozeman, Mont.)—

I. C. Whitham, B. S. F. Supvr.

J. C. Whitham, B. S. F., Supvr. C. B. Swim, Asst. Supvr. Helena (hdqrs., Helena, Mont.)—

Leon C. Hurtt, B. S., Supvr. H. H. Hendron, B. S. F., Tech Asst.

Jefferson (hdqrs., Great Falls, Mont.)— Wilford B. Willey, B. S. F., M. F., Supvr.

Kootenai (hdqrs., Libby, Mont.)— Clyde S. Webb, Supvr. Justin K. Dwinelle, Asst. Supvr. R. W. Billings, B. S. F., Tech. Asst. R. E. Fields, B. S., Tech. Asst.

Rene LaRocque, B. S. F., Ranger. Lewis and Clark (hdqrs., Choteau,

Mont.)— Wm. E. Lockhart, Super.

Lolo (hdqrs., Missoula, Mont.)— Theo. Shoemaker, Supvr. John H. Clack, Asst. Supvr.

T. E. Rowland, B. S., Tech. Asst.
S. M. Lukens, B. S. F., Ranger.
E. C. Tennant, B. S. F., Ranger.

Madison (hdqrs., Sheridan, Mont.)—Walter J. Derrick, Supvr.
F. T. Carroll, Asst. Supvr.
W. E. Fry, B. S. F., Ranger.
H. E. Schwan, B. S., Ranger.

Washington:

Kaniksu (hdqrs., Newport, Wash.)— J. E. Ryan, Supvr.

K. A. Klehm, Log. Engr.F. M. Cossitt, B. S., Tech. Asst.N. B. Fullerton, B. S., Ranger.

#### REGION 2 .- Rocky Mountain Region

Colorado, Wyoming, South Dakota, Nebraska, and western Oklahoma (hdqrs., Denver, Colo.)

Allen S. Peck, B. S., Ph. B., Reg. For.

#### Law.

W. J. Ise, LL. B., LL. M., Reg Law Off.

Lands and Public Relations.

John W. Spencer, B. A., M. F., Asst. Reg. For.

Fred. R. Johnson, B. S., M. F., Reg. For. Insp.

T. M. Moorman, LL. B., Admin. Asst.

## Finance and Acounts.

Joel I. Buckner, Reg. Fiscal Agt. V. W. Campbell, Dep. Reg. Fiscal Agt.

#### Operation.

C. J. Stahl, Asst. Reg. For.
Ress Phillips, Reg. For. Insp.
Riley Cass, jr., Chief Surv.
James P. Reddick, Chief Surv.
Thomas J. Watkins, Supt. Road Const.
M. R. Kennedy, Purchasing Agt.

#### Forest Management.

M. W. Thompson, B. S., M. F., Asst. Reg. For.

H. D. Cochran, A. B., B. S. F., Reg. For. Insp.

J. A. Donery, Log. Engr.

Jay Higgins, B. S. F., Tech. Asst.

#### Range Management.

John H. Hatton, B. S., Asst. Reg. For. Lynn H. Douglas, B. S. A., Admin. Asst. C. A. Kutzleb, Tech. Asst.

## Engineering.

J. L. Brownlee, C. E., Ch. E., M. E., Reg. Engr.

F. E. Washburn, Chief Drft.

## National Forests.

Colorado:

Arapaho (hdqrs., Hot Sulphur Springs, Colo.)—

Donald E. Clark, B. S., Supvr. E. A. Snow, B. S., Tech. Asst.

Cochetopa (hdqrs., Salida, Colo.) — Charles B. Mack, Supvr.

Fred Stell, B. S. F., Tech Asst.

Colorado (hdqrs., Fort Collins, Colo.)—
Wm. R. Kreutzer, LL. B., Supvr.
C. L. Van Giesen, B. S., M. F., Tech.
Asst.

Grand Mesa (hdqrs., Grand Junction, Colo.)—

Ray Peck, Supvr.

Gunnison (hdqrs., Gunnison, Colo.)— J. V. Leighou, B. S. F., Supvr. Ray R. Clarke, Asst. Supvr.

Holy Cross (hdqrs., Glenwood Springs, Colo.)—

Harold L. Borden, B. S. F., Super. Wm. B. Fay, Asst. Super.

Montezuma (hdqrs., Mancos, Colo.)—
A. F. Hoffman, B. S. F., Supvr.
W. L. Schipull, B. S. F., Tech. Asst.

## National Forests-Continued.

Colorado-Continued.

Pike (hdqrs., Colorado Springs, Colo.)— E. S. Keithley, Supvr. II. D. Petheram, Tech. Asst. Ralph R. Hill, B. S., M. F., Tech. Asst.

W. H. Schrader, Nurseryman.

Rio Grande (hdqrs., Monte Vista, Colo.)—

R. E. Clark, Ph. B., M. F., Super. P. L. Ginter, B. S., Tech. Asst.

Routt (hdqrs., Steamboat Springs, Colo.)—

P. V. Woodhead, Super.

Charles R. Towne, B. S. F., Tech. Asst.

San Isabel (hdqrs., Pueblo, Colo.)—
H. Earl French, B. S., M. F., Super.
Fritz J. Poch, B. S. F., Tech. Asst.

San Juan (hdqrs., Durango, Colo.)—
Andrew Hutton, B. S. F., Super.
Edward Wright, Asst. Super.

Uncompangre (hdqrs., Delta, Colo.)— J. S. Veeder, Super.

W. L. Robb., B. S., Tech. Asst.
 D. W. Shaw, B. S. F., Tech. Asst.

White River (hdqrs., Glenwood Springs, Colo.)—

Lewis R. Rist, Supvr. Eldred R. Ware, Tech. Asst.

#### Nebraska:

Nebraska (hdqrs., Halsey, Nebraska)— Arthur L. Nelson, B. S. F., Supvr. Victor J. Dayharsh, B. S., Nurseryman.

## Oklahoma:

Wichita (hdqrs., Cache, Okla.)— Harry H. French, Super.

## South Dakota:

Black Hills (hdqrs., Deadwood, S. D.)—
Theodore Krueger, Supvr.

Galen W. Pike, B. S. F., M. F., Tech. Asst.

Harney (hdqrs., Custer, S. D.)— James F. Conner, Supvr. John H. Sieker, B. S., M. F., Tech. Asst.

#### Wyoming:

Bighorn (hdqrs., Sheridan, Wyo.) — Fred B. Agee, Supvr.

Medicine Bow (hdqrs., Laramie, Wyo.)→

Huber C. Hilton, B. S., M. S., Supvr. Fred H. Miller, B. S. F., Tech. Asst.

Shoshone (hdqrs., Cody, Wyo.)—
J. N. Langworthy, Supvr.

Washakie (hdqrs., Lander, Wyo.)—W. J. Pearce, Supvr.

## REGION 3.-Southwestern Region

Arizona and New Mexico (hdqrs., Albuquerque, N. Mex.).
Frank C. W. Pooler, Reg. For.

E. S. French, LL. B., M. P. L., Reg. Law. Off.

Finance and Accounts.

Albert Morris, Reg. Fiscal Agt. P. H. Harley, Dep. Fiscal Agt.

Operation.

H. G. Calkins, B. S., Asst. Reg. For. James F. Mullen, Reg. For. Insp. Stanley F. Wilson, A. B., M. F., Reg. For.

Edward P. Ancona, B. S. F., Sr. Admin. Asst. (maintenance).

Forest Management.

Quincy Randles, B. S., M. S. F., Asst. Reg. For.

D. M. Lang, Log. Engr.

W. H. Long, A. M., Ph. D., Consult. Path. (Bur. of Pl. Ind.).

Range Management.

John Kerr, Asst. Reg. For. David A. Shoemaker, Range Exam. W. G. Koogler, Asst. Range Exam.

Lands.

M. M. Cheney, LL. B., Asst. Reg. For. H. D. Burrall, B. S. F., Rec. Engr. Willard F. Bond, B. S., M. F., Land Exam.

Engineering.

C. A. Long, C. E., Reg. Engr. R. L. Hughes, Asst. Reg. Engr. (roads).

Public Relations.

John D. Jones, A. B., J. D., Asst. Reg. For.

National Forests.

Arizona:

Apache (hdqrs., Springville, Ariz.)-Ralph W. Hussey, B. S., Supvr. R. B. Ewing, Asst. Supvr.

Coconino (hdqrs., Flagstaff, Ariz.)-E. G. Miller, A. B., Supvr. Robt. M. Munro, Asst. Supvr.

Fred Merkle, Log Engr.

Arthur B. Young, E. M., Supt. of Road Const.

Robt. F. Rhinehart, Sr. Lumberman, Eastburn R. Smith, A. B., M. F., Sr. For. Ranger.

Lloyd A. Wall, B. S. F., M. S., Asst. Range Exam.

Coronado (hdqrs., Tucson, Ariz.)— Frederic Winn, B. S., Super. C. W. McKenzie, Asst. Supvr. Wm. John Anderson, Asst. Super.

Crook (hdqrs., Safford, Ariz.)-Rex. King, A. B., M. S. F., Supvr. C. E. Moore, Asst. Supvr.

H. W. Naylor, Grazing Spec. Prescott (hdgrs., Prescott, Ariz.)-

F. L. W. Grubb, Supvr. L. J. Putsch, Asst. Supvr. Sitgreaves (lidqrs., Holbrook, Ariz.)-

Paul H. Roberts, B. S. F., Supvr. Robt. C. Salton, B. S., Asst. For.

National Forests-Continued.

Arizona-Continued.

Sitgreaves-Continued.

Kimberlin Carlisle, Chief Lumber-

E. L. Hamilton, B. S., Jr. For. Edward C. Groesbeck, Jr. For.

Tonto (lidgrs., Phoenix, Ariz.)-T. T. Swift, Ph. G., M. E., Supvr. J. H. Sizer, Asst. Supvr.

W. E. Wiltbank, Grazing Spec. Tusayan (hdqrs., Williams, Ariz.)— G. W. Kimball, A. B., M. F., Supvr. William T. Doherty, F. E., Asst. Super.

Francis J. Monighan, Sr. For. Ranger. New Mexico:

Carson (hdqrs., Taos, N. Mex.)-C. R. Dwire, Supvr.

C. A. Merker, B. S. F., Asst. Supvr. Datil (hdqrs., Magdalena, N. Mex.)-F. L. Kirby, Supvr.

Robt. V. Boyle, Asst. Supvr.

Gila (hdqrs., Silver City, N. Mex.)-James A. Scott, Supvr.

L. R. Lessel, B. S. F., Asst. Supvr. Lincoln (hdqrs., Alamogordo, Mex.)-

O. F. Arthur, Supvr.

Simeon Strickland, Asst. Supvr. R. D. Morris, B. S. F., Asst. Range Exam.

Wilson M. Beveridge, B. S. F., Jr. For.

Manzano (hdgrs., Albuquerque, Mex.)-

John A. Adams, M. E., Supvr. Jacob C. Nave, Asst. Supvr.

Landis J. Arnold, A. B., Sr. For. Ranger.

Santa Fe (hdqrs., Santa Fe, N. Mex.) -Frank E. Andrews, Supvr.

L. F. Cottam, Asst. Supvr.

J. C. Roak, B. S. F., Asst. Supvr. C. H. Kissam, B. F., F. E., Supt.

Road Const. Jackson W. Space, B. S. F., Sr. For. Ranger.

#### REGION 4 .- Intermountain Region

Utah, southern Idaho, western Wyoming, Nevada, and northwestern Arizona (hdqrs., Ogden, Utah). R. H. Rutledge, Reg. For.

Finance and Accounts.

Lee Straton, Reg. Fiscal Agt. A. C. Wycoff, Dep. Fiscal Agt.

Operation.

C. N. Woods, Asst. Reg. For. Thomas V. Pearson, Admin. Asst.

State Cooperative Fire Protection under Clarke-McNary Law, Idaho.

C. B. Morse, M. S., Asst. Reg. For.

Forest Management.

C. B. Morse, M. S., Asst. Reg. For.

E. C. Sanford, B. S., Asst.

U. S. Swartz, Log. Engr.

#### Range Management.

Ernest Winkler, Asst. Reg. For.

O. A. Olson, Fish and Game. A. R. Standing, Insp. of Grazing.

#### Lands.

R. E. Gery, Asst. Reg. For.

#### Engineering.

J. P. Martin, C. E., Reg. Engr.

W. W. Blakeslee, Asst.

H. M. Shank, Assoc. Civil Engr. (maps and surveys).

J. P. Martin, C. E., Reg. Engr. (roads).
J. P. Martin, C. E., Reg. Engr. (water power).

#### Public Relations.

Dana Parkinson, A. B., M. F., Asst. Reg. For.

#### National Forests.

#### Arizona:

Kaibab (hdqrs., Kanab, Utah)— Walter G. Mann, Super.

#### Idaho:

Boise (hdqrs., Boise, Idaho) --

Guy B. Mains, Super. Arthur Potter, Asst. Super.

J. W. Stokes, B. S., M. E., Tech. Asst.

H. C. Hoffman, B. S., M. S., Tech. Asst.

Wallace M. Saling, B. S., Jr. Range Exam.

Caribou (hdqrs., Montpelier, Idaho)— F. S. Moore, Supvr.

Challis (hdqrs., Challis, Idaho)—
James Farrell, B. S., Super.

James Farrell, B. S., Super. E. E. McKee, Asst. Super. Idaho (hdqrs., McCall, Idaho)—

S. C. Scribner, Super.
F. W. Godden, B. S., Asst. Super.

Lemhi (hdqrs., Mackay, Idaho)— E. A. Renner, Super.

Minidoka (hdqrs., Burley, Idaho)— S. S. Stewart, A. B., M. S., Super.

Payette (hdqrs., Emmett, Idaho)—
W. B. Rice, B. A., M. F., Supvr.
Francis Wallis, Asst. Supvr.
Clark Miles, Tech. Asst.
Robert Davis, B. S., Tech. Asst.
Clayton W. Scribner, B. S., Tech.
Asst.

Salmon (hdqrs., Salmon, Idaho)—
John N. Kinney, Supvr.

D. E. Romano, B. S., Asst. Super.

Sawtooth (hdqrs., Hailey, Idaho)—
T. H. Van Meter, B. S., Asst. Super.
M. S. Benedict, Super.
H. H. Price, B. S. In Paper From

H. H. Price, B. S., Jr. Range Exam.
L. R. Dremolski, B. S., Jr. Range Exam.

Targhee (hdqrs., St. Anthony, Idaho)—
S. W. Stoddard, Supvr.
David A. Arrivee, B. S., Asst. Supvr.
Wilford L. Keene, B. S., Tech. Asst.
Dan Bulfer, B. S., Tach. Asst.
Alford P. Balch, B. S., Tech. Asst.

National Forests-Continued.

Idaho—Continued.

Weiser (hdqrs., Weiser, Idaho)— John Raphael. Supvr. Felix C. Koziol, B. S., Asst. Supvr. F. H. Kennedy, B. S., Tech. Asst.

Nevada:

#### Nevada

Humboldt (hdqrs., Elko, Nev.)—
Alexander McQueen, Supper.
Wilford E. Tangren, Asst. Supper.
Nevada (hdqrs., Ely, Nev.)—

Chas. A. Beam, Supvr.

Toiyabe hdqrs., Austin, Nev.)—C. J. Olsen, Super.

#### Utah:

Ashley (hdqrs., Vernal, Utah)— J. O. Stewart, B. S., Supvr.

Cache (hdqrs., Logan, Utah)—Carl B. Arentson, Supvr.

Dixie (hdqrs., Cedar City, Utah)—
J. E. Gurr, Supvr.

Fishlake (hdqrs., Richfield, Utah)— C. A. Mattsson, Supvr. A. L. Taylor, Asst. Supvr.

Percy B. Rowe, W. F., Tech. Asst.

La Sal (hdqrs., Moab, Utah)—
A. C. Folster, Supvr.

Manti (hdqrs., Ephraim, Utah)— J. W. Humphrey, Super.

Powell (hdqrs., Panguitch, Utah)—
Wallace M. Riddle, Supvr.
J. D. Hensen, B. S., Jr. Range Exam.

Uinta (hdqrs., Provo, Utah)— Chas. DeMoisy, jr., Super.

Geo. C. Larson, Asst. Super.
Wasatch (hdqrs., Salt Lake City,
Utah)—

A. G. Nord, Super. Blaine Betenson, Asst. Super.

## Wyoming:

Teton (hdqrs., Jackson, Wyo.)—A. C. McCain, Supvr.

Wyoming (hdqrs., Kemmerer, Wyo.)—C. E. Favre, M. S., Super.
Milo H. Deming, B. S., Asst. Super.
J. T. Mathews, B. S., Tech. Asst.
N. D. Millard, B. S., Tech. Asst.

### REGION 5.-California Region

California and southwestern Nevada (hdqrs., San Francisco, Calif.): Stuart B. Show, A. B., M. F., Reg. For.

#### Torr

H. P. Dechant, A. B., LL. B., Asst. to Solicitor.

#### Finance and Accounts.

A. W. Smith, Reg. Fiscal Agt. Howard E. Marshall, Dep. Fiscal Agt.

## Operation.

Robert L. Deering, A. B., M. F., Asst. Reg. For.

Paul P. Pitchlynn, Reg. For. Insp. (personnel, insp. and improvements).

E. V. Lackey, Admin. Asst.

Elsa H. Schmieder, Chief of Maintenance. C. E. Jordan, Reg. For. Insp. Operation-Continued.

W. A. Huestis, Supt. of Road Const. (minor roads and trails).

Frank E. Woodridge, Chief Surv. (minor roads and trails).

Chas. L. Young, Chief Surv. (minor roads and trails).

F. H. Hafley, Telephone Engr.

Fire Control.

Jay H. Price, B. S., Asst. Reg. For. Walter E. Jotter, B. S., Assoc. For. Tom West, Asst. For. Supper.

State Cooperative Fire Protection under Clarke-McNary Law, California and Territory of Hawaii.

Jay H. Price, B. S., Asst. Reg. For.

Forest Management.

T. D. Woodbury, Ph. B., M. F., Asst. Reg. For.

C. E. Dunston, B. F., Assoc. For.

J. R. Berry, Log. Engr.

B. O. Hughes, B. S., Asst. For. (logging).

J. C. Elliott, Lumberman (timber sales). O. M. Evans, Assoc. For. (timber surveys).

Forest Pathology (in coop. with Bur. of Pl. Ind.).

Willis W. Wagner, A. B., M. S., Consult.

Ernest Wright, B. S., M. S., Jr. Path.

Forest Insect Investigations (Univ. of California, Berkeley, Calif.).

H. E. Burke, Ph. D., Sr. Ent.

J. M. Miller, B. S., Sr. Ent.

K. A. Salman, Ph. D., Agt.

G. R. Struble, B. S., A. M., Asst. Ent.

Range Management.

Jesse W. Nelson, Asst. Reg. For. R. W. Beeson, B. A., Asst. For.

Lands.

L. A. Barrett, Asst. Reg. For. George Miller, Reg. For. Insp.

W. H. Friedhoff, E. M., Reg. For. Insp.

Engineering.

E. W. Kramer, C. E., Reg. Engr.

John C. Beebe, B. S., C. E., Sr. Civil Engr.

S. H. Ketcham, E. M., Assoc. Hydroelectrical Engr. (water power).

H. A. Sedelmeyer, Chief Drft.

T. R. Littlefield, B. F., F. E., Chief Surv. (maps and surveys).

B. B. Burnett, C. E., Asst. Reg. Engr. (roads).

J. H. Lawrence, Asst. Engr. (bridges).

J. F. Serex, A. B., Sr. Engr., Drft.

Public Relations.

Wallace I. Hutchinson, A. B., M. F., Asst. Reg. For.

Robert W. Ayres, Ph. B., M. F., Sr. Admin. Asst.

James N. Gibson, B. S., Jr. For.

Helen M. Moore, B. S. in L. S., Libr.

#### National Forests.

California:

Angeles (hdqrs., Los Angeles, Calif.)— Wm. V. Mendenhall, Supvr. Guerdon Ellis, B. S., Asst. Supvr.

August J. Mueller, Asst. Supvr.
California (hdqrs., Willows, Calif.)—
Frank Price, Supvr.

W. F. Derby, A. B., Asst. Supvr. J. Milton Buck, Jr. For.

Cleveland (hdqrs., San Diego, Calif.)— L. H. Anderson, Supvr.

Mayhew H. Davis, Asst. Supvr.

Albert M. Longacre, B. S., Jr. For. Eldorado (hdqrs., Placerville, Calif.)—E. F. Smith, Supvr.

Arnold N. Weber, B. S., M. S., Jr. For.

Travis M. Tyrrell, B. S., Jr. For. Inyo (hdqrs., Bishop, Calif.)—

Roy Boothe, Supvr.
Klamath (hdqrs., Yreka, Calif.)—
F. D. Douthitt, Supvr.

Thomas A. Bigelow, Asst. Supvr.
Alfred K. Crebbin, Jr. For.

Alfred K. Crebbin, Jr. For. George K. Fox, B. S., Jr. For. George E. Sargent, B. S., Jr. For. W. W. Wooldridge, Foreman Road

Const.
Lassen (hdqrs., Susanville, Calif.)—

W. G. Durbin, Suppr. James P. Farley, B. S., Asst. Suppr. Reuben P. Box, Asst. Suppr (N. Butte Prot. Dis.).

Marc W. Edmonds, B. S., Asst. For. Luther B. Burkett, B. S., Jr. For. S. Cooper Smith, B. S., Jr. Range Exam.

Waldo E. Wood, B. S., Jr. Range

C. W. Corson, B. S., M. S., Jr. For. Modoc (hdqrs., Alturas, Calif.)—
Fred P. Cronemiller, B. S., Supvr. Russell S. Bacon, B. S., M. S. F., Jr. For.

Alvin L. Parker, B. S., Jr. For. Fred J. Dooley, Prin. Lumberman.

Plumas (hdqrs., Quincy, Calif.)—
D. N. Rogers, B. S., M. F., Supvr.
John T. Gray, Asst. Supvr.
Wm. S. Price, Prin. Lumberman.
Ambrose B. Everts, B. S., Jr. For.

Paul R. Kevin, B. S., Jr. For. Henry E. Norton, B. S., Jr. For. Lloyd W. Swift, B. S., Jr. Range Exam.

San Bernardino (hdqrs., San Bernardino, Calif.)—

J. E. Elliott, Supvr.

John S. Everitt, B. S., M. F., Asst. Supvr.

Frank A. Robinson, Asst. Supvr. Leon H. J. Cranston, Asst. Supvr. Santa Barbara (hdqrs., Santa Barbara, Calif.)—

S. A. Nash-Boulden, Supvr.

National Forests—Continued.
California—Continued.

Santa Barbara—Continued.

Ernest L. Baxter, B. S., Jr. For. Paul C. Case, B. S. F., M. F., Jr.

Clarence A. Morris, Asst. Super. Judell M. Samon, Asst. Super.

Sequoia (hdqrs., Porterville, Calif.)— F. P. Cunningham, Supvr.

John S. Edwards, B. S., Asst. Supvr. B. H. Mace, Asst. Supvr.

B. H. Mace, Asst. Super. Cyril S. Robinson, Jr. Range Exam.

Shasta (hdqrs., Mt. Shasta, Calif.)— Thos. J. Jones, Super. Frank Myers, Asst. Super.

Dewitt Nelson, B. S., Asst. Super. Charles C. Buck, B. S., Jr. For.

Belknap G. Goldsmith, B. S., M. F., Log. Engr. Charles A. VanDewalker, B. S., Jr.

For. Fred W. Johnson, B. S., Jr. Range

Exam.

Sierra (hdqrs., Northfork, Calif.)—

M. A. Benedict, B. S., Super.

Audie K. Wofford, Asst. Super.

Carl A. Gustafson, B. S., M. S., Jr. For.

William V. Jones, Jr. For. William E. Nelson, B. S., Jr. For. Stanislaus (hdqrs., Sonora, Calif.)—

J. R. Hall, B. S., M. S., Supvr. Claude K. Barker, Asst. Supvr. Orville P. Burnett, B. S., Asst. For. Joseph A. Cary, Jr. Range Exam. Roberts E. Jones, B. S., Jr. For. Heber P. Struble, B. S., Jr. For.

Tahoe (hdqrs., Nevada City, Calif.)—
R. L. P. Bigelow, Supvr.
Earl E. Bachman, B. S., Asst. For.
George R. Shrader, Jr. For.
Randal McCain, B. S. F., Jr. For.

Leland S. Smith, Asst. Range Exam.
Trinity (hdqrs., Weaverville, Calif.)—
Millard M. Barnum, B. S., Supper,
Percy D. Hanson, B. S., Asst. Supper,
Frederick W. Grover, B. S., Jr. For.

Nevada:

Mono (hdqrs., Minden, Nev.)— Wm. M. Maule, Supvr.

#### REGION 6 .- North Pacific Region

Washington and Oregon (hdqrs., Portland, Oreg.).

C. J. Buck, A. B., B. S., M. F., Reg. For.

Finance and Accounts.

A. H. Cousins, Reg. Fiscal Agt. H. J. Well, Dep. Fiscal Agt.

## Operation.

A. O. Waha, Asst. Reg. For. Shirley Buck, Admin. Off.

K. P. Cecil, Insp. (improvements).

R. F. Grefe, B. S. F. (studies). R. A. Bottcher, Asst. Insp.

T. P. Flynn, Asst. Insp.

Operation-Continued.

C. M. Allen, Telephone Engr.

Allen H. Hodgson, M. F., Personnel Training.

## Fire Control.

F. H. Brundage, Ph. B., M. F., Asst. Reg. For.

W. B. Osborne, jr., A. B., M. F., Lisp. (fire suppression).

T. M. Talbott, Asst. Insp. (law enforcement).

## Inspection of Oregon and California Railroad Lands and State Fire Cooperation.

E. H. MacDaniels, A. B., M. F., Insp. (fire coop.).

#### Forest Management.

Fred Ames, A. B., M. F., Asst. Reg. For.
B. E. Hoffman, B. S., Sr. Logging Engr.
O. F. Ericson, A. B., M. S. F., Log. Engr.
Walter H. Lund, B. S. F., Log. Engr.
G. E. Stevenson, Chief Lumberman (check scaling).

Fred A. Matz, Chief Lumberman (timber surveys).

Lester M. McPherson, B. S. F., Jr. For.

## Planting and Forest Investigations.

J. F. Kummel, M. A., For. Exam. (planting).

E. J. Hanzlik, B. S. F., For. Exam. (investigation).

# Forest Pathology (in coop. with Bur. of Pl. Ind.).

H. G. Lachmund, A. B., Assoc. Path. J. L. Mielke, B. S. F., Jr. Path.

J. R. Hansbrough, B. S. H., Jr. Path.

## Forest Insect Control.

A. J. Jaenicke, B. S. F., For. Exam.

#### Range Management.

E. N. Kavanagh, Asst. Reg. For.W. L. Dutton, B. S., Admin. Asst.

#### Lands.

F. V. Horton, Asst. Reg. For. F. W. Cleator, Asst. Insp. (recreation).

W. H. Friedhoff, E. M., Mineral Exam. Adolph Nilsson, B. S., Chief Land Exam.

### Engineering.

Philip H. Dater, A. B., B. S., Reg. Engr. J. Frankland, C. E., Assoc. Engr. (maps and surveys). Victor Flach, Chief Drft.

## Public Relations.

John D. Guthrie, Ph. B., M. F., Asst. Reg. For.

Geo. E. Griffith, Admin. Asst.

E. Maude Stone, Libr.

#### National Forests.

#### Oregon:

Cascade (hdqrs., Eugene, Oreg.)—
P. A. Thompson, Supvr.
Foster Steele, Asst. Supvr.
C. C. Olsen, B. S. F., Supt. of Const.
Axel G. Lindh, B. S. F., For. Rany.
M. L. Holst, B. S. F., Tech. Asst.

National Forests-Continued.

Oregon-Continued.

Crater (hdqrs., Medford, Oreg.)— H. B. Rankin, Supvr.

Karl L. Janouch, B. S., Asst. Supr. N. C. White, B. E., Asst. Supvr. (Fire).

W. J. Sproat, M. F., Tech. Asst.

Deschutes (hdqrs., Bend, Oreg.)— Carl B. Neal, A. B., M. F., Supvr. A. G. Angell, Asst. Supvr.

W. J. Perry, Lumberman.

C. H. Huntington, B. S. F., Jr. For. Leslie L. Çolvill, B. S. F., Fire Asst. Wm. Hallin, B. S., M. F., Jr. For. Chas. H. Overbay, B. S., Sr. For.

Ranger.

Fenton G. Whitney, B. S., Sr. For. Ranger.

Fremont (hdqrs., Lakeview, Oreg.)—
J. F. Campbell, Supvr.

Lawrence Frizzell, Asst. Supvr. Henry C. Hulett, M. S. F., Jr. For. Chester A. Bennett, B. S., Jr. For.

F. G. Ellis, B. S. F., Jr. Range Exam.

Malheur (hdqrs., John Day, Oreg.)—Carl M. Ewing, Supvr.

J. C. Scharff, Asst. Super.

H. R. Elliott, Jr. For.O. L. Beedon, B. S., Jr. Range Exam.

James C. Iler, B. S. F., Jr. For. R. B. Pierpont, Supt. of Const.

C. W. Waterbury, Lumberman.

Mount Hood (hdqrs., Portland, Oreg.)—
Thomas H. Sherrard, A. B., Supvr.
R. T. Carter, Asst. Supvr.

H. D. Foster, A. B., M. F., Tech.

F. E. Williamson, jr., B. S. F., Recreation Asst.

O. E. Tharp, B. S. F., For. Ranger. Ralph W. Crawford, B. S. F., Jr. For.

F. F. Murray, Supt. Const.

Ochoco (hdqrs., Prineville, Oreg.)— W. O. Harriman, A. B., Supvr.

H. C. Obye, B. S. F., Tech. Asst.

Santiam (hdqrs., Albany, Oreg.)— C. C. Hall, Supvr.

H. E. Haefner, B. S. A., Asst. Supvr. H. G. White, Asst. Supvr. (Fire).

Siskiyou (hdqrs., Grants Pass, Oreg.)— J. H. Billingslea, B. S. F., Supvr.

M. M. Lewis, Asst. Supvr.
A. G. Jackson, A. B., M. S. F., Tech.
Asst.

John K. Blair, Jr. For.

Vondis E. Miller, M. S. F., Jr. For.

Siuslaw (hdqrs., Eugene, Oreg.)—
Ralph S. Shelley, B. S., Supvr.
A. R. Wilcox, B. S., Asst. For.
M. H. Durbin, B. S. F., For. Ranger.

National Forests-Continued.

Oregon-Continued.

Umatilla (hdqrs., Pendleton, Oreg.)— J. F. Irwin, Supvr.

Bernard Lee, B. S. F., Jr. For. F. D. Monroe, B. S., Jr. For.

Umpqua (hdqrs., Roseburg, Oreg.)—
Vernon V. Harpham, Supvr.
T. H. Burgess, B. S., Asst. Supvr.

T. H. Burgess, B. S., Asst. Supvr. K. P. McReynolds, B. S. F., Jr. For. Paul S. Pieper, B. S. F., For. Ranger.

Wallowa (hdqrs., Wallowa, Oreg.)—
Fred W. Furst, B. S., Supvr.
E. E. Birkmaier, B. S., Asst. Supt.

Whitman (hdqrs., Baker, Oreg.)—
John C. Kuhns, Supvr.

Rolland Huff, Asst. Super. I. E. Jones, Supt. of Const.

J. L. Peterson, B. S. H., Assoc. Range Exam.

P. L. Paine, B. S. F., Jr. For. Otto G. Koenig, B. S. F., For. Ranger.

Washington:

Chelan (hdqrs., Okanogan, Wash.)—
P. T. Harris, A. B., M. F., Supvr.
C. T. Moir, jr., Asst. Supvr.

Roy Mitchell, Fire Asst. J. G. Burghardt, Roads.

Columbia (hdqrs., Portland, Oreg.)—
J. R. Bruckart, Supvr.
Lester Mongrief B S F 4 cet

Lester Moncrief, B. S. F., Asst. Supvr.
G. A. Bright, B. A., M. F., Tech.

Asst.

J. M. Mann, Supt. of Const.
W. F. Will, Planting Asst., Wind River Nursery.

Colville (hdqrs., Republic, Wash.)—Glenn E. Mitchell, Supvr.

Lloyd L. Houghland, Fire Asst. J. B. Hogan, B. S. F., Tech. Asst. Robt. E. Foote, Supt. of Const.

Mount Baker (hdqrs., Bellingham, Wash.)—

Lawrence B. Pagter, B. A., M. F., Supvr.

Lewis A. Treen, jr., B. S. F., Supt. Const.

Lage Wernstedt, M. E., M. F., Asst. For.

D. J. Stoner, B. S. F., Jr. For.

Olympic (hdqrs., Olympia, Wash.)— H. L. Plumb, A. B., M. S. F., Supvr. Lee P. Brown, B. S. F., Asst. Supvr. Paul H. Logan, B. S. F., Jr. For. C. F. Ritter, Supt. Const.

John C. Wilkinson, B. S. F., Asst. Ranger.

Rainier (hdgrs., Tacoma, Wash.)— E. J. Fenby, Supvr.

R. L. Fromme, B. S. A., M. F., Asst. Supvr.

E. R. Johnson, Supt. of Const. Otto Lindh, B. S. F., Jr. For.

National Forests-Continued.

Washington-Continued.

Rainier-Continued.

Dahl Kirkpatrick, B. S. F., Tech.

Snoqualmie (hdqrs., Seattle, Wash.)-W. G. Weigle, M. F., Supvr.

Lewis A. Treen, jr., B. S. F., Supt. of Const.

Floyd W. Cory, B. S. F., Jr. For.

(hdqrs., Wenatchee, Wenatchee Wash.)-

Gilbert D. Brown, Super.

C. J. Conover, B. S., M. S. F., Asst. Super.

H. W. Elofson, B. S., Range Exam. R. D. Maclay, B. S., Jr. For.

#### REGION 7 .- Eastern Region

Alabama, Arkansas, Florida, Georgia, Louisiana, Maine, Mississippi, New Hampshire, North Carolina, Pennsylvania, Porto Rico. South Carolina, Tennessee, Vermont, Virginia, and West Virginia (hdqrs., Washington, D. C.).

Joseph C. Kircher, B. A., M. F., Reg. For.

Finance and Acounts.

Louis King, Reg. Fiscal Agt. H. B. Herms, Dep. Reg. Fiscal Agt.

Operation.

II. O. Stabler, M. F., Asst. Reg. For. R. W. Shields, B. S., Reg. For. Insp.

Forest Management.

R. M. Evans, B. A., M. F., Asst. Reg. For. L. S. Gross, B. S., Assoc. Reg. For. Insp.

Range Management.

I. T. Yarnall, B. S., Asst. Reg. For.

Lands.

I. T. Yarnall, B. S., Asst. Reg. For. W. W. Ashe, M. S., Sr. Reg. For. Insp. Percy J. Paxton, B. A., M. F., Sr. Reg. For. Insp.

#### Engineering.

J. C. Dort, B. S., Reg. Engr. Rezin E. Pidgeon, Asst. Reg. Engr. Geo. W. Root, Assoc. Engr. Darnall Burks, B. S., Asst. Engr.

## National Forests.

Alabama:

Alabama (hdgrs., Athens, Tenn.)-Clinton G. Smith, B. S., M. F.,

Arkansas:

Ouachita (hdqrs., Hot Springs Nat. Park, Ark.)-

Arnold C. Shaw, B. S., Supvr. A. W. Hartman, B. S., Asst. Supvr. E. J. Schlatter, B. S., Asst. For.

Herbert E. Ochsner, B. S., M. F., Asst. For.

H. L. Russell, A. B., M. F., Assoc.

Chas. Melichar, B. S., M. F., Jr. For. P. F. W. Prater. B. S., Jr. For.

National Forests-Continued.

Arkansas-Continued.

Ouachita-Continued.

Donald W. Beck, B. S., Jr. For. Wm. R. Paddock, B. S., Jr. For. Alfred H. Anderson, B. S., Jr. For. Geo. C. Hoffman, B. S., Jr. For. Seaborn J. Johnson, B. S., Jr. For. Frank W. Rasor, B. S., Jr. For. M. B. Ricker, B. S., Land Appraiser.

Ozark (hdqrs., Russellville, Ark.)-

Henry R. Koen, Supvr.

Philip H. Bryan, B. S., Jr. For. Samuel D. Beichler, B. S., Jr. For. James S. Long, M. F., Jr. Land Appraiser.

K. M. Stoller, B. S., Jr. Land Appraiser.

Florida:

Choctawhatchee (hdqrs., Pensacola, Fla.)-

Sam R. Broadbent, B. S., M. F., Supvr.

Willis B. Wheelis, B. S., M. F., Jr. Land Appraiser.

Ocala (hdqrs., Lake City, Fla.)-Evan W. Hadley, B. S., Supvr.

M. C. Howard, B. S., Jr. For. Osceola Purchase Unit (hdqrs., Lake City, Fla.)-

Evan W. Hadley, B. S., Supvr. F. A. Albert, B. S., Jr. For.

Louisiana:

Kisatchie Purchase Unit (hdqrs., Alexandria, La.)-

Chas. A. Plymale, Supvr.

L. S. Marriage, B. S., Jr. Land Appraiser.

Mississippi:

Homochitto Purchase Unit (hdgrs., Brookhaven, Miss.)-Chas. A. Plymale, Supvr.

R. J. Riebold, B. S., Asst. For.

New Hampshire:

White Mountain (hdqrs., Laconia, N. H.)-

James E. Scott, Supvr.

Gerald S. Wheeler, B. S., M. F., Asst. Supvr.

H. R. Currier, Asst. Supvr. Thos. C. Flint, B. S., M. F., Jr. For. Allen R. Cochran, B. S., Jr. For. J. Neil Van Alstine, B. S., Jr. For. A. C. Van Nort, B. S., Jr. For.

North Carolina:

Nantahala (hdqrs., Franklin, N. C.)-J. B. Byrne, B. S., Super.

John Wasilik., jr., M. F., Ph. B., Land Appraiser.

John H. Stone, B. S., M. F., Jr. For. Donald Young, B. S., M. F., Jr. For. Zeke B. Byrd, B. S., Jr. For.

Pisgah (hdqrs., Asheville, N. C.)-M. A. Mattoon, M. F., Ph. B., Super. Wm. P. Kramer, B. S., Asst. Super.

#### National Forests-Continued.

Pennsylvania:

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G. R. Salmond, Asst. Supvr.

L. R. Strickenberg, B. S., Chief Land Exam.

W. I. Stevens, B. S., M. F., Jr. Land Appraiser.

E. E. Ripper, B. S., Jr: Land Appraiser.

Gilbert L. Varney, B. S., M. F., Jr. For.

#### Porto Rico:

Luquillo (hdqrs., Rio Piedras, P. R.)-Wm. R. Barbour, B. S., Super.

Cherokee (hdqrs., Athens, Tenn.)-Clinton G. Smith, B. S., M. F., Supvr.

R. M. Conarro, Asst. Super.

James Denman, B. S., Chief Land

F. C. Henneberger, B. S., Jr. Land Appraiser.

Unaka (hdqrs., Bristol, Tenn.)-Clifford L. Graham, Supvr.

A. R. Kinney, B. S., Chief Land Exam.

L. E. Fitch, B. S., Jr. Land Appraiser.

#### Virginia:

Natural Bridge (hdqrs., Lynchburg, Va.)-

Harold M. Sears, B. S., Supvr.

Wm. L. Maule, B. S., Jr. For.

Geo. K. Stephenson, B. S., M. F., Jr. For.

T. E. Pease, B. S., Sr. For. Ranger. Shenandoah (hdgrs., Harrisonburg, Va.)-

John W. McNair, Super.

Chas. E. Beaumont, Ph. B., Assoc.

F. Henry Sipe, B. S., M. F., Jr. For. Vermont:

Purchase Unit Green Mountain (hdqrs., Bennington, Vt.)-

D. W. Tabbutt, B. S., Land Appraiser.

#### Virgin Islands:

(Hdqrs., St. Thomas, V. I.)— E. V. Roberts, B. S., M. F., Assoc. For.

#### West Virginia:

Monongahela (hdgrs., Elkins, W. Va.)-

A. A. Wood, Supvr.

E. R. Conrad, Chief Land Exam.

D. A. Oliver, B. S., Nurseryman.

W. E. Hedges, Chief Land Exam.

Lewis R. Smith, B. S., Jr. For. A. D. McKellar, B. S., Jr. Land Ap-

praiser.

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Chas. H. Flory, B. S., Reg. For.

Finance and Accounts.

H. L. Redlingshafer, Reg. Fiscal Agt. W. C. Ellis, Dep. Reg. Fiscal Agt.

#### Operation.

M. L. Merritt, M. S., Asst. Reg. For.

#### Forest Management.

B. F. Heintzleman, M. F., Asst. Reg. For. J. P. Williams, For. Exam. (timber surreys).

R. F. Taylor, M. F., For. Exam. (silvical research).

#### Lands.

M. L. Merritt, M. S., Asst. Reg. For. Wellman Holbrook, For. Exam.

#### Engineering.

M. L. Merritt, M. S., Asst. Reg. For. (roads).

B. F. Heintzleman, M. F., Asst. Reg. For. (water power).

#### National Forests.

#### Alaska:

Chugaeh (hdqrs., Cordova, Alaska)-W. J. McDonald, Supvr.

Tongass (hdqrs., Ketchikan, Alaska)-Robert A. Zeller, B. S., Supvr. Wendell Moran, B. S. F., Jr. For.

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Crosby A. Hoar, B. A., M. F., Asst. Reg. For.

Albin G. Hamel, B. S., For. Insp (Clarke-McNary Coop.).

John L. McLaren, For. Insp.

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Shelley E. Schoonover, Reg. Fisc. Agt. Wm. B. Ihlandfeldt, Dept. Reg. Fiscal and Purchasing Agt.

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Roads:

Holland Coleman, Assoc. Civil Engr.

Maps and Surveys:

H. P. McConnell, Drft.

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Huron National Forest (hdqrs. East Tawas, Mich.)-

Gunnar K. Fenger, B. S. F., For.

Super. Ralph H. Johnson, Nurseryman.

H. C. Turner, B. S., Nurseryman.

Upper Michigan National Forests (hdqrs., Munising, Mich.)-Leslie S. Bean, B. S. F., in charge.

National Forests and Purchase Units-Contd. Michigan-Continued.

Upper Michigan National Forests-Continued.

Alban G. Roemer, B. S. F., Mackinac Forest, Munising, Mich. H. Phil Brandner, B. S. F., Mar-

quette Forest, Raco, Mich.

S. E. Doering, Keweenaw Forest, Kenton, Mich.

Minnesota:

Chippewa National Forest (hdqrs. Cass Lake, Minn.)-

James M. Walley, B. S. F., Super. Allen F. Miller, B. S. F., Asst.

Superior National Forest (hdqrs. Ely, Minn.)-

S. D. Anderson, B. S. F., Super. Calvin B. Stott, B. S. F., Asst.

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Superior National Forest-Continued. Wm. L. Barker, Jr., B. S. F., Aquisition Work, Superior and Missabe Units, Duluth, Minn.

Wisconsin:

Wisconsin Purchase Units (hdgrs. Park Falls, Wis.)-

R. U. Harmon, B. S. F., Super.

Russell B. McKennan, B. S. F., Asst. G. Willard Jones, in charge Rhine-

lander Nursery, Rhinelander, Wis. Donald R. Ball, B. S. F., Moquah P. U., Washburn, Wis. Ray C. Iverson, B. S. F., Oneida

P. U., Eagle River, Wis.

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Harrison M. Hoyt, LL. B., Head Clerk. Minnesota-Minneapolis:

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Hershey W. Brunk, Foreman Gardener.

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George C. Mayoue, B. S., M. S., Assoc. Path.

Harry E. Morris, B. S., M. S., Agt. District No. 2-Brookings, S. Dak. (South Dakota, eastern Nebraska):

Raymond O. Bulger, B. S., M. S., Agt. Marion E. Yount, B. S., Agt.

District No. 3-Fort Collins, Colo. (Colorado, western Nebraska, Wyoming): Ernest A. Lungren, B. S., M. S., Assoc. Path.

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## Eastern Control Program.

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Connecticut:

New Haven-

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Maine:

Auburn-

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Eastern Control Program-Continued.

Eastern and Lake States-Continued.

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Vermont:

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Western Control Program.

Gilbert B. Posey, B. S., M. S., Sr. Path., in charge.

Western States (field hdqrs., Spokane, Wash.):

Stephen N. Wyckoff, B. S., Sr. Path., Field Supr.

California:

Berkelev-

Frank A. Patty, B. S., M. S., Asst. Path.

Clarence R. Quick, A. B., Agt. Harold R. Offord, B. A., M. A., Agt. George R. Van Atta, Agt. Jack A. Vogtmann, Agt. Western Control Program-Continued.

Western States-Continued.

California—Continued.

Berkeley-Continued.

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#### Weed Investigations.

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(3) Cereal Smut Investigations.

James A. Faris, B. S., M. A., Ph. D., Sr. Path. Herman A. Rodenhiser, B. S., M. S., Ph. D., Path.

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## California:

Berkeley-

Ruth F. Allen, B. A., M. A., Ph. D., Path. (cereal rust inv.).

#### Biggs-

Loren L. Davis, B. S., M. S., Asst. Agron. and Supt. (rice inv.).

#### Davis-

Gustav A. Wiebe, B. S., M. S., Asst. Agron. (cereal prod. and improvement).

#### Field Stations-Continued.

Colorado-Akron:

John J. Curtis, B. S., Jr. Agron. (cereal prod. and improvement).

#### Georgia:

Athens-

Ross R. Childs, B. S., M. S., Agt. (cereal prod. and improvement).

Tifton-

Harry S. Garrison, B. S., Asst. Agron. (corn inv.).

#### Idaho:

#### Aberdeen-

Harland Stevens, B. S., Agt. (cereal prod. and improvement).

#### Moscow-

Victor H. Florell, B. S., M. S., Ph. D., Assoc. Agron. (cereal prod. and improvement).

Wayne M. Bever, B. S., M. S., Jr. Path. (stripe rust inv.).

J. Milford Raeder, B. S., M. S., Agt. (stripe rust inv.).

#### Illinois-Bloomington:

James R. Holbert, B. S., M. S., Ph. D., Sr. Agron. (corn root-rot, stalk-rot, and car-rot inv.).

Boyd C. Frye, Asst. Sci. Aid. (corn root-rot, stalk-rot, and ear-rot inv.).

Indiana-La Fayette:

John F. Trost, B. S., M. S., Assoc. Path. (corn root-rot, stalk-rot, and ear-rot inv.).

Ralph R. St. John, B. S., M. S., Assoc.

Agron. (corn root-rot, stalk-rot, and
ear-rot inv.).

Glenn M. Smith, B. S., M. S., Asst. Path. (corn root-rot, stalk-rot, and car-rot inv.).

Roy A. Weaver, B. S., Agt. (chemical studies, corn diseases).

Ralph M. Caldwell, B. S., M. S., Ph. D., Agt. (leaf rust inv.).

Leroy E. Compton, B. S., M. S., Asst. Path. (leaf rust inv.).

## Iowa-Ames:

Merle T. Jenkins, B. S., M. S., Ph. D., Assoc. Agron. (corn inv.).

Arthur A. Bryan, B. S., M. S., Assoc.

Agron. (corn inv.).

Robert W. Jugenheimer, Agt. (corn inv.).

Hickman C. Murphy, B. S., M. S., Ph. D., Asst. Path. (oat orown-rust inv.).

Lyman C. Burnett, B. S., M. S., Agt. (cereal prod. and improvement).

## Kansas:

#### Havs-

Arthur F. Swanson, B. S., M. S., Assoc, Agron. (cereal prod. and improvement).

#### Manhattan-

Arthur M. Brunson, B. S., M. S., Ph. D., Agron. (corn inv.).

Carl W. Bower, B. S., M. S., Asst. Agron. (corn inv.).

#### Field Stations-Continued.

Kansas-Continued.

Manhattan—Continued.

John H. Parker, B. S., M. S., Ph. D., Agron. (cereal breeding and improvement).

Leo E. Melchers, B. S., M. S., Agt. (cereal diseases).

Hurley Fellows, B. S., M. S., Ph. D., Assoc. Path. (wheat foot-rot inv.).

Lytton W. Boyle, B. S., M. S., Asst. Path. (wheat foot-rot inv.).

Christian H. Ficke, B. S., M. S., Jr. Path. (wheat foot-rot inv.). Charles O. Johnston, B. S., M. S.,

Assoc. Path. (leaf rust inv.).

#### Louisiana:

Baton Rouge-

Hugo Stoneberg, B. S., M. S., Asst. Agron. (corn inv.).

#### Crowley-

J. Mitchell Jenkins, B. S., Assoc. Agron. and Supt. (rice inv.).

## ----, Jr. Agron. (rice inv.).

## Minnesota:

## St. Paul-

Moses N. Levine, B. S., M. S., Ph. D., Path. (stem rust inv.).

Helen Hart, B. A., M. A., Ph. D., Agt. (stem rust inv.).

Elmer R. Ausemus, B. S., M. S., Assoc. Agron. (cereal breeding inv.).

Rayburn H. Bamberg, B. S., M. S., Agt. (cereal diseases).

Herbert K. Hayes, B. S., M. S., Sc. D., Collab. (cereal breeding inv.).

Clyde C. Allison, B. S., M. S., Agt. (flax diseases).

### Missouri:

#### Columbia---

Lewis J. Stadler, B. S., A. M., Ph. D., Sr. Geneticist. (corn inv.).

#### Hsberry—

Bascom M. King, B. S., A. M., Agt. (rice inv.).

#### Montana-Moccasin:

Joe L. Sutherland, B. S., M. S., Jr. Agron. (cereal prod. and improvement).

#### Nebraska:

#### Lincoln-

Coit A. Suneson, B. S., M. S. Jr. Agron. (cereal prod. and improvement).

Theodore A. Kiesselbach, A. B., B. S., A. M., Ph. D., Agt. (corn inv.).

## North Platte-

Nelson E. Jodon, B. S., Jr. Agron. (cereal prod. and improvement).

#### New York-Ithaca:

Lowell F. Randolph, Ph. B., Ph. D., Assoc. Cytol. (cytology, histology, and morphology of corn). Field Stations-Continued.

New York-Ithaca-Continued.

William T. Craig, Agt. (cereal prod. and improvement).

Ernest Dorsey, B. S., Ph. D., Agt. (cytology of cereals).

North Dakota:

Dickinson-

Ralph W. Smith, B. S., M. S., Assoc. Agron. (cerea! prod. and improvement).

Fargo-

Harold H. Flor, B. S., M. S., Ph. D., Assoc. Path. (flax diseases).

Langdon—

Glenn S. Smith, B. S., M. S., Jr. Agron. (cereal prod. and improvement).

Mandan-

John C. Brinsmade, jr., A. B., Asst. Agron. (flax inv.).

Vincent C. Hubbard, B. A., M. A., Jr. Agron. (cereal prod. and improvement).

Ohio-Wooster:

Jasper D. Sayre, B. A., M. A., Ph. D., Physiol. (corn physiology).

John S. Cutler, B. S., M. S., Agt. (corn inv.).

Vincent H. Morris, B. A., M. A., Ph. D., Agt. (corn inv.).

Glen H. Stringfield, B. S., M. S., Agt. (corn inv.).

Oklahoma-Woodward:

John B. Sieglinger, B. S., M. S., Agron. (grain sorghum and broomcorn inv.).

Edmund Stephens, B. S., M. S., Jr. Agron. (cereal prod. and improvement).

Oregon:

Corvallis-

Roderick Sprague, B. S., M. S., Ph. D., Asst. Path. (wheat foot rots).

Ioro-

David E. Stephens, B. S., Sr. Agron. and Supt. (cereal prod. and improvement).

Robert B. Webb, B. S., Jr. Agron. (cereal prod. and improvement).

Robert B. Hoskinson, Sr. Agr. Aid (cereal prod. and improvement).

Pendleton-

James F. Martin, B. S., M. S., Jr. Agron. (cereal prod. and improvement).

South Dakota-Redfield:

Edgar S. McFadden, B. S., Assoc. Agron. (cereal prod. and improvement).

Tennessee-Knoxville:

Ludwig S. Mayer, B. S., M. S., Asst. Agron. (corn inv.).

Texas:

Beaumont-

Henry M. Beachell, B. S., Agt. (rice inv.).

Field Stations-Continued.

Texas—Continued.

Denton-

Irvin M. Atkins, B. S., Jr. Agron. (cereal prod. and improvement).

Utah-Logan:

Rollo W. Weodward, B. S., M. S., Jr. Agron. (cereal prod. and improvement).

Virginia—Rosslyn (Arlington Exp. Farm):

Harold H. McKinney, B. S., M. S., Sr. Path. (virus diseases).

———, Asst. Path. (virus diseases). Walter Marcey, Head Gardener (virus

discases).

Robert W. Leukel, B. S., M. S., Assoc. Path. (cereal disease inv.).

Fred Young, Asst. Sci. Aid. (cereal disease inv.).

Victor F. Tapke, B. S., Ph. D., Path. (cereal smut inv.).

John W. Taylor, B. S., M. S., Assoc. Agron. (cereal production and improvement).

Horace V. Wester, Jr. Sci. Aid (cereal smut inv.).

Asst. Sci. Aid (oat inv.).

Washington-Pullman :

Edward F. Gaines, B. S., M. S., Sc. D., Agt. (cereal smut inv.)

inv.). Asst. Path. (cereal smut

Orville A. Vogel, B. S., M. S., Agt. (cereal prod. and improvement).

Wisconsin-Madison:

James G. Dickson, B. S., M. S., Ph. D., Agt. (cereal disease inv.).

Allan D. Dickson, B. S., Ph. D., Agt. (barley scab).

Paul E. Hoppe, B. S., Assoc. Path. (barley scab).

Ruebush G. Shands, B. S., M. S., Ph. D., Agt. (barley scab).

Helen Johann, A. B., A. M., Assoc. Path. (wheat scab inv.).

Chester Barlow, Asst. Sci. Aid (wheat scab inv.).

## DIVISION OF CITRUS CANKER ERADICATION

Directed by Assoc. Chief of Bureau. FIELD HEADQUARTERS.

Alabama-Mobile:

John W. Pace, B. S., M. S., Agt. (delegated by Comr. of Agr. of Alabama to direct all local work pertaining to erad. of citrus canker).

Florida—Gainesville:

Wilmon Newell, B. S., M. S., D. Sc., State Pl. Comr. (Collab.).

Louisiana-Baton Rouge:

W. E. Anderson, B. S., State Ent. (Collab.).

FIELD HEADQUARTERS-Continued.

Mississippi—A. and M. College: Clay Lyle, Agt., Acting in chg.

Clay Lyle, Agt., Acting in chg Texas—Austin:

J. M. Del Curto, B. S., State Ent.

# DIVISION OF COTTON, RUBBER, AND OTHER TROPICAL PLANTS

O. F. Cook, Ph. B., D. Sc., Prin. Bot., in charge.

Crop Acclimatization, Cotton Production and Diseases, and Rubber Production Investigations.

C. B. Doyle, Prin. Agron.

W. H. Jenkins, B. S., Assoc. Agron.

J. A. Shanklin, B. S., M. S., Asst. Agr. Econ.

L. G. Polhamus, Assoc. Tech.

R. L. Taylor, Chief Sci. Aid.

A. V. McMullan, Asst. Sci. Aid.

FIELD STATIONS.

Arizona—Sacaton (U. S. Field Station):

C. J. King, B. S., Agron. and Supt. Eugene D. Eaton, Jr. Path.

Claude Hope, B. S., Jr. Hort. Carl A. Mooseberg, Sci. Aid.

California:

Bard (U. S. Acclimatization Garden)—

R. E. Beckett, Prin. Sci. Aid (Acting Supt.).

R. S. Stitt, Asst Sci. Aid.

Indio--

H. G. McKeever, Assoc. Agron.

Shafter (U. S. Cotton Field Station)—

F. W. Herbert, Prin. Sci. Aid (Acting Supt.).
W. E. Clark, B. S., Jr. Agron.

J. E. Hite, B. S., M. A., Agt.

J. W. Hubbard, Sr. Sci. Aid. Stanford University—

H. M. Hall, B. S., M. S., Ph. D., Collab.

Torrey Pines (U. S. San Diego Acclimatization Garden)—

C. G. Marshall, Asst. Agron. and Supt.

A. D. Harvey, Sci. Aid.

Florida:

Coconut Grove (U. S. Plant Introtion Garden)-

H. F. Loomis, Assoc. Agron. Alfred Keys, Assoc. Hort.

Joseph L. Fennell, Asst. Sci. Aid. J. A. Elder, Under Sci. Helper.

J. F. Joyner, Under Sci. Helper. Zephyrhills—

E. S. De Long, Collab.

Georgia-Atlanta:

C. A. McLendon, Agt.

Haiti:

Bayeux-

Laurence Bolte, Agt.

Crop Acclimatization, etc.—Continued.

FIELD STATIONS-Continued.

Haiti—Continued.

Thor-

F. C. Baker, B. S., Sr. Technol. and Supt.

New Mexico—State College (U. S. Acclimatization Field Station):

A. R. Leding, Chief Sci. Aid. (Acting Supt.)

L. R. Lytton, Asst. Sci. Aid.

South Carolina—James Island, near Charleston (U. S. Acclimatization Field Station):

D. M. Simpson, B. S., Assoc. Agron. and Supt.

J. S. Townsend, Tech.

Robert T. Stutts, Jr. Tech.

W. W. Ballard, Chief Sci. Aid. W. E. Townsend, Agt.

J. G. Jenkins, Agt.

J. P. Royall, Under Sci. Helper.

Texas:
Austwell—

J. H. Kinsler, Collab.

Greenville (U. S. Cotton Breeding Field Station)—

H. C. McNamara, B. S., Assoc. Agron. and Supt.

D. C. Neal, B. S., A. M., Ph. D., Sr. Path.

D. R. Hooton, B. S., Asst. Pomol.W. P. Snyder, B. S., M. S., Jr. Agron.

D. D. Porter, Asst. Sci. Aid. Robert E. Wester, Asst. Sci. Aid. R. F. Saunders, Agt.

San Antonio-

L. G. McLean, Sci. Aid.

# DIVISION OF DRUG AND RELATED PLANTS

W. W. Stockberger, B. S., Ph. D., Prin. Physiol., in charge.

Drug Plants, Volatile Oils, Fixed Oils, and Waste Products Investigations.

Arthur F. Sievers, Pharm. G., B. S., Sr. Biochem.

Frank Rabak, Pharm. G., B. S., Assoc. Bioohem.

Morris S. Lowman, B. A., Asst. Biochem.

Poisonous Plant Investigations.

Otis F. Black, A. B., A. M., Sr. Biochem. Willard W. Eggleston, B. S., Asst. Bot. James W. Kelly, Phar. D., Jr. Biochem.

Hop Disease Investigations.

FIELD HEADQUARTERS.

Oregon—Corvallis:

E. N. Bressman, B. S., M. S., Ph. D., Agt.

G. R. Hoerner, B. S., M. S., Agt.

## DIVISION OF DRY LAND AGRICUL-TURE

Clyde E. Leighty, B. A., Ph. D., Prin. Agron., in charge.

John S. Cole, B. S., Sr. Agron.

NORTHERN FIELD STATIONS (hdqrs., Mandan, N. Dak.).

John M. Stephens, B. S., Prin. Agr. and Supvr., Northern group.

Colorado-Akron.

Joseph F. Brandon, B. S., Assoc. Agron., Supt.

#### Montana:

#### Havre-

George W. Morgan, B. S., Assoc. Agron., Supt.

Huntley-

Arthur E. Seamans, B. S., Assoc. Agron.

Moccasin-

John E. Norton, B. S., M. S., Agt. Supt.

Nebraska-North Platte:

Leslie L. Zook, B. S., Assoc. Agron. Harry E. Weakly, B. S., M. S., Jr. Agron.

#### North Dakota:

Dickinson-

Leroy Moomaw, B. S., Assoc. Agron., Supt.

Mandan (hdqrs. of Supvr., Northern group)—

William P. Baird, B. S., Assoc. Hort. Johnson T. Sarvis, B. S., M. S., Assoc. Agron.

John C. Thysell, B. S., Assoc. Agron. Thomas K. Killand, B. S., Sr. Sci. Aid.

Ernest J. George, B. S., Asst. Sil. Oregon—Pendleton:

David E. Stephens, B. S., Sr. Agron., Supt.

George A. Mitchell, B. S., Asst. Agron. Merrill M. Oveson, B. S., M. S., Agt. South Dakota:

Ardmore-

Oscar R. Mathews, B. S., M. S., Assoc. Agron., Supt. Verner I. Clark, Sci. Aid.

Newell-

Albert Osenbrug, B. S., Assoc. Agron.

## Wyoming:

Archer-

August L. Nelson, B. S., M. S., Assoc. Agron., Supt.

Sheridan-

Ray S. Towle, B. S., Assoc. Agron., Supt.

Ralph M. Williams, B. S., Jr. Agron. SOUTHERN FIELD STATIONS (hdqrs., Woodward, Okla.).

Ellery F. Chilcott, B. S., Sr., Agr. and Super., Southern group.

#### Kansas:

Colby-

Embert H. Coles, B. S., Assoc. Agron., Supt.

Joseph B. Kuska, B. S., Assoc. Agron.

Garden City-

Richard L. von Trebra, B. S., Agt.

SOUTHERN FIELD STATIONS—Continued, Kansas—Continued.

Havs-

Alanson L. Hallsted, B. S., Assoc. Agron.

Arthur E. Mortensen, B. S., M. S., Agt.

New Mexico-Tucumcari:

Donald R. Burnham, B. S., Assoc. Agron., Supt.

Oklahoma:

Lawton-

Walter M. Osborn, B. S., Assoc. Agron., Supt. Woodward (hdqrs. of supvr., South-

Woodward (hdqrs. of supvr., Southern group)—

Lowell F. Locke, B. S., Assoc. Hort. Harry J. Clemmer, B. S., Assoc. Agron.

Sidney S. Burton, B. S., Agt. Ivan A. Lucas, Agt.

#### Texas:

Big Spring-

Fred E. Keating, B. S., Assoc. Agron., Supt.

Dalhart-

Benjamin F. Barnes, B. S., Assoc. Agron. Supt.

#### DIVISION OF EGYPTIAN COTTON BREEDING

T. H. Kearney, LL. D., Prin. Physiol., in charge.

Egyptian Cotton Breeding Investigations.

FIELD STATION.

Arizona—Sacaton:

George J. Harrison, B. L., Associate Agronomist.

Harold J. Fulton, B. S., Assistant Agronomist.

#### Cytological and Genetic Investigations of Cotton.

California—Riverside (Rubidoux Laboratory):

John M. Webber, B. S., M. S., Ph. D., Assoc. Cytol.

## DIVISION OF FIBER PLANT INVESTI-GATIONS

Lyster H. Dewey, B. S., Sr. Bot., in charge. H. T. Edwards, B. S., Sr. Technol.

FIELD HEADQUARTERS.

Michigan-East Lansing:

Brittain B. Robinson, B. S., M. S., Asst. Pl. Breeder.

Porto Rico-Mayaguez:

Rafael Vidal, Agt.

Wisconsin-Madison:

A. H. Wright, B. S., M. S., Agt.

## DIVISION OF FORAGE CROPS AND DISEASES

Russell A. Oakley, B. S., D. Sc., Prin. Agron. in charge.

Adrian J. Pieters, B. S., Ph. D., Prin. Agron., acting in charge.

Alfalfa.

Harvey L. Westover, B. S., Sr. Agron.

Red Clover.

Eugene A. Hollowell, B. S., M. S., Ph. D., Agron.

Soybeans, Cowpeas, Pigeon Peas, and Velvetbeans.

William J. Morse, B. S., Sr. Agron.

Southern Pastures and Grasses.

Harry N. Vinall, B. S., M. S., Sr. Agron. Sorghums.

Harry N. Vinall, B. S., M. S., Sr. Agron.

Sweetclover, Crimson Clover, and White Clover. Leonard W. Kephart, B. S., Sr. Agron.

Vetches, Crotalarias, Bur Clovers, and Green Manuring.

Roland McKee, B. S., M. S., Sr. Agron.

Fine Turf.

Adrian J. Pieters, B. S., Ph. D., Prin. Agron.

Forage Diseases.

Adrian J. Pieters, B. S., Ph. D., Prin. Agron.

Northern Grasses and Pastures, Lawns.
Charles R. Enlow, B. S., M. S., Assoc.

Acid-tolerant Legumes and Miscellaneous Legumes.

Adrian J. Pieters, B. S., Ph. D., Prin. Agron.

Agron.
Roland McKee, B. S., M. S., Sr. Agron.

Arlington Farm Grass Garden and Greenhouse Work.

Percy L. Ricker, B. S., M. S., Asst. Bot.

Seed Storage and Shipment.

Fred C. Hall, Sr. Sci. Aid.

FIELD HEADQUARTERS.

California-Riverside:

James L. Weimer, A. M., Ph. D., Sr. Path.

Florida-Gainesville:

George E. Ritchey, B. S., M. S., Asst. Agron.

Georgia-Tifton:

James L. Stephens, B. S., Agt.

Iowa—Ames:

F. Scott Wilkins, B. S., M. S., Agt.

Kansas:

Hays-

David A. Savage, B. S., Asst. Agron. Manhattan—

Clarence O. Grandfield, B. S., M. S., Agt.

Louisiana-Jeanerette:

John B. Thompson, B. S., Asst. Agron. Maryland—Beltsville:

Mason A. Hein, B. S., M. S., Asst. Agron.

Herbert L. Wilkins, B. S., Asst. Chem. Michigan—Augusta:

A. B. Dorrance, B. S., M. S., Asst. Agron.

FIELD HEADQUARTERS-Continued.

Mississippi:

Stoneville-

Paul R. Henson, B. S., Asst. Agron. West Point—

Tyler F. Akers, B. S., M. S., Asst. Agron.

Missouri-Columbia:

E. Marion Brown, B. S., M. A., Agt.

Montana-Moccasin:

Harold E. Tower, B. S., Agt.

Nebraska—Lincoln:

Hewitt M. Tysdal, B. S., M. S., Assoc. Agron.

North Carolina:

Statesville--

Rhea E. Stitt, B. S., M. S., Asst. Agron.

Willard-

William M. Stuart, jr., B. S., Asst. Agron.

Ohio:

Holgate-

David Heusinkveld, B. S., M. S., Asst. Agron.

Jackson L. Cartter, B. S., M. S., Asst. Agron.

North Ridgeville-

Morgan W. Evans, B. S., M. S., Assoc.

Oregon-Corvallis:

Harry A. Schoth, B. S., M. S., Assoc.

Pennsylvania-Kylertown:

Guy C. Fuller, B. S., Agt.

South Carolina-Columbia:

Robert B. Carr, B. S., Agt.

Joseph C. Stephens, B. S., M. S., Asst. Agron.

Vermont-Middlebury:

Robert F. Copple, B. S., M. S., Asst. Agron.

Virginia—Rosslyn:

Howard W. Johnson, B. A., M. S., Ph. D., Assoc. Path. (leaf-hopper inves.).

Anselm T. Stone, Sci. Aid.

Washington-Pullman:

Edwin G. Schafer, B. S., M. S., Agt.

West Virginia—Morgantown: Robert R. Robinson, Agt.

Wisconsin-Madison:

Fred R. Jones, B. S., M. S., Ph. D., Sr. Path.

## DIVISION OF FOREIGN PLANT INTRODUCTION

Knowles A. Ryerson, B. S., M. S., Prin. Hort., in charge.

B. Y. Morrison, B. S., M. L. A., Sr. Hort.

Foreign Explorations.

David Fairchild, B. S., M. S., D. Sc., Prin. Agr. Expl.

P. H. Dorsett, B. Agr., Sr. Hort.

#### Foreign Explorations-Continued.

FIELD HEADQUARTERS:

China-Likiang:

Joseph F. Rock, Collab.

New York-New York:

A. V. Armour, Collab.

#### Experimenters' Service.

W. E. Whitehouse, B. S., M. S., Ph. D., Hort.

B. T. Galloway, B. Agr. Sc., LL. D., D. Agr., Prin. Path.

R. A. Young, B. S., Assoc. Hort.

H. C. Skeels, B. S., Assoc. Bot.

J. C. Long, B. S., Jr. Pom.

W. R. Poore, Sr. Foreman Gardener.

E. C. Rittue, Head Gardener.

William Jones, Sci. Aid.

Mabel I. Yates,\* Asst. Sci. Aid.

FIELD HEADQUARTERS:

Arizona-Superior:

F. J. Crider, Collab.

California—Chico: J. E. Morrow, Sunt.

B. D. Douglas, Sr. Pl. Prop.

C. H. Jackson, Sr. Pl. Prop.

Henry Klopfer, Sr. Sci. Aid.

D. M. Wallen, Jr. Sci. Aid.

#### Florida:

Callahau-

Ernest Petree, Collab.

Coconut Grove-

Edward Simmonds, Prin. Sci. Aid. T. A. Fennell, Prin. Sci. Aid.

J. H. Heuer, Asst. Sci. Aid.

G. W. Kosel, jr., Asst. Sci. Aid. Little River-

Charles Simpson, Collab.

Georgia-Savannah:

David A. Bisset, Chief Sci. Aid.

Maryland-Glenndale:

H. A. Gunning, B. S., Assoc. Hort.,

C. C. Thomas, A. B., M. A., Hort.

Edward Goucher, Chi f Pl. Prop.

A. W. Close, Prin. Sci. Aid.

M. J. Souviren, Sr. Sci. Aid.

V. M. Maroukian, B. S., Head Gar-

J. W. Mullican, Head Gardener

Plant Geography in Relation to Plant Industry. C. O. Erlanson, B. A., M. S., Assoc. Ecol. Paul G. Russell, B. A., M. S., Asst. Bot.

#### DIVISION OF FOREST PATHOLOGY

Haven Metcalf, A. B., A. M., Ph. D., Prin. Path., in charge.

R. Kent Beattie, A. B., B. S., A. M., Prin. Path.

Carl P. Hartley, A. B., A. M., Ph. D., Prin. Path.

G. F. Gravatt, B. S., M. S., Sr. Path.

G. G. Hedgcock, B. S., A. M., Ph. D., Sr. Path.

J. L. Bedwell, B. S., M. S., Assoc. Path.

Annie R. Gravatt,\* A. B., M. S., Assoc. Path.

Ross W. Davidson, B. S., M. S., Asst. Mycol. Ruby J. Acree,\* Jr. Path.

Russell B. Clapper, Sr. Sci. Aid.

Marvin E. Fowler, A. B., A. M., Asst. Sci. Aid.

F. Margaret Milburn, A. B., Asst. Sci. Aid. FIELD HEADQUARTERS:

California-San Francisco:

E. P. Meinecke, Ph. D., Prin. Path. Willis W. Wagener, A. B., M. S., Path. Lake S. Gill, A. B., A.M., Assoc. Path. Ernest Wright, B. S. F., M. S., Jr. Path.

Connecticut-New Haven:

J. S. Boyce, B. S., M. F., M. A., Ph. D., Prin. Path.

Glenn G Hahn, B. S., M. S., Ph. D., Path.

Rush P. Marshall, B. S., M. S., Ph. D., Assoc. Path.

Theodore T. Ayers, B. S., A. M., Ph. D., Aat.

Louisiana-New Orleans:

Paul V. Siggers, B. S., M. S., Assoc. Path.

Ralph M. Lindgren, B. S., M. S., Asst. Path.

Harold R. Hay, Agt,

Theo. C. Scheffer, B. F., M. S., Agt.

Massachusetts-Amherst:

Perley Spaulding, B. S., M. S., Ph. D., Sr. Path.

New Mexico-Albuquerque:

W. H. Long, A. B., A. M., Ph. D., Sr. Path.

Bessie E. Futrell,\* Sci. Aid.

North Carolina-Asheville:

Ralph M. Nelson, B. S., M. S., Ph. D., Asst. Path.

Ohic-Wooster:

O. N. Liming, B. S., M. S., Ph. D., Agt.

Oregon-Portland:

H. G. Lachmund, A. B., Path.

J. R. Hansbrough, Ph. B., A. M., Asst. Path.

J. L. Mielke, B. S. F., Asst. Path.

Thomas W. Childs, B. S., Agt.

Thomas S. Buchanan, Agt. Alan A. McCready, B. S., Agt.

Pennsylvania-Philadelphia:

K. D. Doak, B. S., Ph. D., Asst. Path. Lyle W. R. Jackson, B. S., M. S., Asst. Path.

Rhode Island-Providence:

J. Franklin Collins, Ph. B., Sr. Path. Alma M. Waterman, A. B., A. M., Ph. D., Asst. Path.

M. A. McKenzie, Ph. B., A. M., Agt. C. S. Moses, B. S., M. S., Agt.

Blythe G. Richmond, A. B., A. M., Agt. Scotland-Edinburgh:

Malcolm Wilson, B. S., D. Se., Spec. in For. Path.

Washington-Pullman:

G. G. Hedgcock, B. S., A. M., Ph. D., Sr. Path.

FIELD HEADQUARTERS—Continued.

Wisconsin-Madison:

C. Audrey Richards, A. B., A. M., Ph. D., Path.

Caroline T. Rumbold, B. L., A. M., D. Oec., Ph. D., Assoc. Path. Ira Hatfield, A. B., M. S., Agt. Dale Chapman, B. S., M. S., Agt.

Mae Spradling, B. S., Agt. E. E. Seeliger, Jr. Sci. Aid.

# DIVISION OF GARDENS AND GROUNDS

J. Wise Byrnes, Asst. in charge.

# DIVISION OF GENETICS AND BIOPHYSICS

G. N. Collins, Prin. Bot., in charge.

J. H. Kempton, Bot.

J. O. Belz, Ph. B., M. Di., Assoc. Biophys. L. H. Flint, B. S., M. S., Ph. D., Assoc.

Physiol.

A. E. Longley, B. S., A. M., Ph. D., Assoc.

John W. McLane, B. S., Asst. Biophys. William D. Donahoo, Sr. Lab. Mech. Bruce Caldwell, Un. Sci. Helper.

# DIVISION OF HORTICULTURAL CROPS AND DISEASES

Eugene C. Auchter, B. S., M. S., Ph. D., Prin. Hort., in charge.

H. P. Gould, B. S., M. S., Sr. Pomol.

W. W. Gilbert, B. S., M. S., Sr. Path.
W. R. Beattie, B. S., M. S., Sr. Hort.
(radio specialist).

#### Horticulture.

(1) Regional Development of Horticulture Industry.

L. C. Corbett, B. S., M. S., D. Agr., Prin. Hort.

(2) Deciduous Fruit and Nut Production Investigations.

John R. Magness, B. S., M. S., Ph. D., Prin. Pomol.

George C. Husmann, B. S., M. S., Pomol. (grape inv.).

Clarence A. Reed, B. S., M. H., Assoc. Pomol. (nut culture inv.).

I. W. Dix, Sr. Sci. Aid (grape inv.).

FIELD HEADQUARTERS.

Alabama-Spring Hill:

A. C. Gossard, B. S., M. S., Asst. Pomol. (nut culture inv.).

# California:

Fresno-

Elmer Snyder, B. S., Pomol. (grape inv.).

Oakville-

Frederick L. Husmann, Supt. (grape inv.).

#### Horticulture-Continued.

(2) Deciduous Fruit and Nut Production Investigations—Continued. FIELD HEADQUARTERS—Continued. California—Continued.

Palo Alto-

William F. Wight, B. S., A. B., A. M., Bot. (fruit breeding).

breeding).
Lester A. Thompson, Sr.
Agr. Aid (fruit breeding).

Riverside-

A. D. Shamel, B. S., Prin. Physiol. (bud selection).

C. S. Pomeroy, Ph. B., B. S., Assoc. Pomol. (bud selection).

R. E. Caryl, B. S., M. H., Asst. Pomol. (bud selection).

Sacramento-

C. F. Kinman, B. S., Pomol. (fruit production inv.).

Milo N. Wood, B. S., M. S., Pomol. (nut culture inv.).

Shafter-

Frank N. Harmon, B. S., M. A., Jr. Pomol. (bud selection).

#### Georgia:

Albany---

Harley L. Crane, B. S., M. S., Ph. D., Hort. (nut culture inv.).

Charles L. Smith, B. S., M. S., Ph. D., Assoc. Physiol. (nut culture inv.).

Alton H. Finch, B. S., M. S., Ph. D., Asst. Hort. (nut culture inv.).

Frederick N. Dodge, B. S., Jr. Pomol. (nut culture inv.).

#### Louisiana:

Robson-

J. L. Pelham, B. S., Assoc. Pomol. (nut culture inv.).

Shreveport-

B. G. Sitton, B. S., M. S., Ph. D., Assoc. Pomol. (nut culture inv.).

#### Maryland:

Glenndale-

George M. Darrow, A. B., A. M., Ph. D., Sr. Pomol. (small fruits).

George F. Waldo, B. S., M. S., Asst. Pomol. (small fruits).

#### Michigan:

South Haven-

Stanley Johnston, B. S., Agt. (fruit prod. inv.).

Horticulture-Continued.

(2) Deciduous Fruit and Nut Production Investigations-Continued. FIELD HEADQUARTERS-Continued.

North Carolina:

Raleigh-

Ivan D. Jones, A. B., Ph. D., Agt. (fruit prod. inv.).

Willard-

Charles T. Dearing, B. S., Assoc. Hort. (grape inv.). Oregon:

Corvallis-

Carl E. Schuster, B. S., M. S., Hort. (nut culture

G. Leonard Rygg, B. S., M. S., Agt. (small fruits). William C. Whitaker, B. S., M. S., Agt. (small fruits). Hood River-

Elmer V. Shear, B. S., Assoc. Path. (perennial apple canker inv.).

Texas:

Austin-

H. P. Traub, B. S., M. S., Ph. D., Hort. (nut culture inv.).

C. J. B. Thor, B. S., M. A., Agt. (nut culture inv.).

Brownwood-

Joseph Hamilton, B. S. A., Jr. Pomol. (nut culture

Virginia:

Rosslyn (Arlington Exp. Farm)-

F. P. Cullinan, B. S., M. S., Ph. D., Sr. Pomol. (fruit prod. inv.).

Louis O. Regeimbal, B. S., M. S., Ph. D., Assoc. Physiol. (fruit production inv.).

W. W. Aldrich, B. S., M. S., Ph. D., Asst. Hort. (fruit production inv.),

Elliott S. Degman, B. S., Ph. D., Asst. Pomol. (fruit production inv.)

Joe R. Furr, B. S., Asst. Hort. (fruit production inv.).

Lewis A. Fletcher, B. S., M. S., Ph. D., Asst. Pomol. (fruit production

John H. Weinberger, B. S., Ph. D., Asst. Pomol. (fruit production inv.). Washington-Wenatchee:

C. P. Harley, B. S., M. S., Assoc. Physiol. (physiol. fruit prod. and perennial apple canker).

Horticulture-Continued.

(2) Deciduous Fruit and Nut Production Investigations-Continued. FIELD HEADQUARTERS-Continued.

Washington-Wenatchee-Con.

Enoch L. Reeves, B. S., Jr. Path. (perennial apple canker).

Mortimer P. Masure, B. S., M. S., Jr. Physiol. (physiol. fruit prod.).

(3) Plant Propogation, Nursery Management, and Stock Storage. Guy E. Yerkes, B. S., Hort.

Charles F. Swingle, B. S., Ph. D., Assoc. Pomol.

FIELD HEADQUARTERS.

California-Shafter:

Leo. B. Scott, B. S., Sr. Pomol.

Maryland-College Park:

Frank E. Gardner, B. S., M. S., Ph. D., Sr. Pomol. in charge.

Michigan-South Haven:

Stanley Johnston, B. S., Agt. (nursery stock inv.).

(4) Vegetable Production, Standardization, and Improvement.

Victor R. Boswell, B. S., M. S., Ph. D.,  $Sr.\ Hort.$ 

Sears P. Doolittle, B. S., M. S., Ph. D., Sr. Path. (Cucurbit, tomato and lettuce diseases, and mosaic diseases of vegetables).

Daniel N. Shoemaker, B. S., Ph. D., Hort. (vegetable variety and Jerusalem artichoke inv.).

S. L. Jodidi, B. S., Ph. D., Physiol. (vegetable prod. inv.). J. H. Beattie, B. S., M. S., Assoc. Hort. (vegetable prod. inv.).

Ross C. Thompson, B. S., M. S., Assoc. Hort. (vegetable prod. inv.).

Mary K. Bryan, A. B., Assoc. Path. (tomato diseases).

William S. Porte, B. S., Asst. Path. (vegetable breeding).

F. L. Wellman, B. A., M. S., Ph. D., Assoc. Path. (Cucurbit diseases and mosaic diseases of regetables).

A. M. Jackson, Sci. Aid (vegetable prod. inv.).

E. Q. Knight, Sci. Aid (variety standardization).

FIELD HEADQUARTERS.

California:

Berkeley-

Michael Shapovalov, A. B., M. S., Sr. Path. (tomato diseases).

South Carolina:

Florence-

J. D. McCown, Agt. (vegetable prod. inv.).

Horticulture-Continued.

(4) Vegetable Production, Standardization, and Improvement—Contd. FIELD HEADQUARTERS—Continued. Texas:

Winter Haven-

L. R. Hawthorn, B. S., M. S., Agt. (variety standardization).

Virginia:

Rosslyn (Arlington Exp. Farm)—

Arthur C. Foster, B. S., M. S., Sr. Path. (vegetable prod. inves.).

Roy Magruder, B. S. A., Ph. D., Oler. (variety standardization a n d breeding).

C. E. Steinbauer, B. S., M. S., Jr. Physiol. (vegetable prod. inves.).

F. Sidney Beecher, Sci. Aid (Cucurbit and tomato diseases).

E. C. Tatman, Asst. Sci.

Aid (vegetable prod.

inves.).

(5) Floriculture and Landscape Gardening Investigations.

F. L. Mulford, B. S., in Agr., Assoc. Hort.

D. V. Lumsden, B. S., Jr. Hort. FIELD HEADQUARTERS.

Maryland-Glenndale:

B. Y. Morrison, Sr. Hort. Coop. Office Foreign Plant. Int.

Martin Bilon, Head Gardener.

(6) Bulb Culture Investigations.

David Griffiths, B. S., M. S., Ph. D., Sr. Hort.

FIELD HEADQUARTERS.

Washington-Bellingham:

B. L. Peters, Sr. Sci. Aid.

Howard A. Houser, Sci. Aid. (7) Fruit and Vegetable Utilization.

J. S. Caldwell, A. B., A. M., Ph. D., Sr. Physiol.

C. A. Magoon, A. B., Ph. D., Sr. Bact.

B. C. Brunstetter, B. A., M. S., Ph. D., Assoc. Biochem.

Helen F. Smart\*, A. B., Asst. Path.

FIELD HEADQUARTERS.

Virginia — Rosslyn (Arlington Exp. Farm):

C. W. Culpepper, B. S., M. S., Physiol.

H. H. Moon, B. S., Jr. Pomol.
A. T. Myers, B. S., Jr. Biochem.

Washington-Seattle:

James A. Berry, B. S., M. S., Agt. (Microbiological inv.). Horticulture-Continued.

(8) Fruit and Vegetable Handling, Transportation, and Storage Investigations.

Durward F. Fisher, B. S., M. H., Prin. Hort.

Dean H. Rose, A. B., M. A., Ph. D., Sr. Physiol.

Charles Brooks, A. B., A. M., Ph. D., Prin. Path.

R. C. Wright, B. S., M. S., Physiol. Lowell F. Butler, B. S., M. S., Assoc. Path. (market diseases, fruits and vegetables).

Mark H. Haller, B. S., M. S., Ph. D., Asst. Promol.

E. V. Miller, B. S., M. S., Ph. D., Asst. Physiol.

O. J. Dowd, B. S., Jr. Physiol. A. F. Wahlstrom, Draftsman.

FIELD HEADQUARTERS.

California:

Fresno— W. T. Pentzer, B. S., M. S., Asst. Physiol.

C. E. Asbury, B. S., M. S., Jr. Pomol.

Pomona-

C. W. Mann, B. S., Sr.

E. M. Harvey, A. B., Ph. D., Physiol.

Wm. R. Barger, B. S., Assoc. Physiol.

J. C. Moore, B. S., M. S.,Jr. Physiol.James G. Gray, Jr., B. S.,

Jr. Pomol.

Wm. C. Cooper, B. S., Jr. Pomol.

Illinois-Chicago:

G. B. Ramsey, A. B., A. M., Ph. D., Sr. Path. (market diseases, fruits and vegetables).

Alice A. Bailey, B. S., M. S., Asst. Path. (market diseases, fruits and vegetables).

New York-New York:

C. O. Bratley, B. S., Asso. Path. (market diseases, fruits and vegetables).

Virginia — Rosslyn (Arlington Exp. Farm):

John R. Winston, B. S., M. S., Sr. Hort.

Paul L. Harding, B. S., M. A., Ph. D., Asst. Hort. Jacob M. Lutz, B. S., Jr. Physiol.

T. M. Whiteman, B. S., Jr. Hort.

R. L. Newton, Prin. Mech.

E. A. Gorman, Sci. Aid. Lacy McColloch, Asst. Sci. Aid. Horticulture-Continued.

(8) Fruit and Vegetable Handling, etc .--Continued.

> FIELD HEADQUARTERS-Continued. Washington:

Seattle-

H. C. Diehl, B. S., Sr. Physiol.

Wenatchee-

Henry Hartman, B. S., M. S., Hort.

F. Gerhardt, B. S., M. S., Ph. D., Physiol.

B. D. Ezell, B. S., M. S.,

Asst. Hort. M. C. Goldsworthy, B. S.,

M. S., Ph. D., Asst. Path. (smelter fumes inv.).

Yakima-

A. L. Ryall, B. S., M. S., Asst. Pomol.

Earl D. Mallison, B. S., Asst. Mkt. Spec.

C. L. Powell, B. S., M. S., Jr. Physiol.

(9) Potato Investigations.

William Stuart, B. S., M. S., D. Sc., Sr. Hort.

Frederick J. Stevenson, B. S., M. S., Ph. D., Geneticist.

W. M. Peacock, B. S., M. S., Assoc. Hort.

Edwin H. Milstead, Chief Sci. Aid.

FIELD HEADQUARTERS.

Colorado-Greeley:

W. C. Edmundson, B. S., M. S., Hort.

Maine-Fresque Isle:

P. M. Lombard, B. S., Assoc. Hort.

C. F. Clark, B. S., M. S., Ph. D., Assoc. Hort.

Minnesota-St. Paul:

H. M. Darling, Ph. B., Agt. (potato breeding).

E. J. Wheeler, B. S., M. S., Agt. (potato breeding).

New York—Ithaca: J. J. McAllister, Agt.

W. R. Mills, Agt.

A. A. Warren, B. S., Agt.

North Carolina:

Raleigh-

J. H. Beaumont, B. S., Ph. D., Agt.

(10) Cheyenne Horticultural Field Station.

FIELD HEADQUARTERS.

Wyoming—Cheyenne:

A. C. Hildreth, B. S., Ph. D., Agt. (Prin. Hort. and Supt.).

John L. Emerson, B. S., Agt. (Shelter Belt Investigations).

Horticulture-Continued.

(10) Cheyenne Horticultural Field Station-Continued.

FIELD HEADQUARTERS-Contd. Wyoming-Cheyenne-Contd.

M. F. Babb, B. S., Agt. (regetable inv.).

John D. Kelso, Prin. Sci. Aid.

Crop Physiology and Breeding.

Walter T. Swingle, B. S., M. S., D. Sc., Prin. Physiol.

T. Ralph Robinson, A. B., A. M., Sr. Physiol, (citrus breeding and life history studies).

Eugene May, jr., Prin. Sci. Aid (citrus breeding and life history studies).

R. D. Thompson, Asst. Gardener.

FIELD HEADQUARTERS.

Arizona-Sacaton:

Robert H. Peebles, Chief Sci. Aid (date inv.).

California:

Indio---

Roy W. Nixon, B. S., Assoc, Hort. (date inv.).

Dewey C. Moore, Sci. Aid (date inv.).

Los Angeles-

F. A. Thackery, Sr. Agr. (date inv.).

Florida-Eustis:

E. M. Savage, Asst. Pl. Breeder (citrus breeding and life history studies).

Maryland-Bethesda:

Robert J. Bullen, Sr. Sci. Aid (citrus breeding and life history studies).

Fruit Disease Investigations.

Merton B. Waite, B. S., D. Agr., Prin.

Harry R. Fulton, A. B., A. M., Prin. Path. (citrus and subtropical fruit disease inv.).

John W. Roberts, A. B., A. M., Ph. D., Sr. Path. (orchard spraying inv.).

J. S. Cooley, A. B., M. S., Ph. D., Sr. Path. (perennial apple canker inves.).

H. F. Bain, B. A., M. S., Sr. Path. (grape and small fruit disease inv.).

Eugene A. Siegler, B. A., M. S., Path. (crown gall inv.).

Nellie A. Brown, A. B., Assoc. Path. (crown gall inv.).

J. Marion Shull, Assoc. Bot. (general

orchard disease inv.). John J. Bowman, M. S., Asst. Path. (citrus and subtropical fruit disease

Angie M. Beckwith, A. B., Jr. Path. (grape and small fruit disease inv.).

Mary M. Drechsler,\* B. S., Sr. Sci. Aid (general orchard disease inv.).

Marguerite S. Wilcox, Sci. Aid (grape and small fruit disease inv.).

Ralph B. Piper, Sci. Aid (crown gall inv.).

# Fruit Disease Investigations-Continued.

FIELD HEADQUARTERS.

Alabama-Spring Hill:

Howard E. Parson, B. S., M. S., Asst. Path. (pecan and other nut diseases).

Arkansas-Fayetteville:

John C. Dunegan, B. S., Assoc. Path. (orchard spraying inv.).

Carroll S. Morrow, Agt. (orchard spraying inv.).

Glenn T. Boyd, Agt. (orchard spraying inv.).

California-Fresno:

W. S. Ballard, A. B., Sr. Path. (physiological fruit disease inv.). Florida—Orlando:

Harold E. Stevens, B. S. A., M. S., Sr. Path. (citrus and subtropical fruit disease inv.).

John F. Wootten, Prin. Sci. Aid (citrus and subtropical fruit disease inv.).

#### Georgia:

Albany-

Juan B. Demaree, B. S., Path. (pecan and other nut disease inv.).

J. R. Large, B. S., M. S., Jr. Path. (pecan discases).

Fort Valley-

Lee M. Hutchins, B. S., Ph. D., Sr. Path. (phony peach inv.).

John L. Rue, Sci. Aid (phony peach inv.).

Indiana-Vincennes:

Leslie Pierce, Prin. Sci. Aid (orchard spraying inv.).

Louisiana—Sbreveport:

John R. Cole, B. S., M. S., Assoc. Path. (pecan and other nut disease inv.).

Massachusetts-Amherst:

Herbert F. Bergman, B. S., M. S., Ph. D., Sr. Path. (grape and small fruit disease inv.).

Walton E. Truran, Agt. (cranberry disease inv.).

Missouri-Marionville:

Howard B. Johnson, B. S., Jr. Path. (orchard spraying inves.).

New Jersey-Toms River:

R. B. Wilcox, M. S., Assoc. Path. (grape and small fruit disease inv.).

Joseph L. Kelley, Agt. (cranberry disease inv.).

North Carolina-Chadbourn:

G. A. Meckstroth, B. A., M. A., Assoc. Path. (strawberry diseases). Oregon:

Corvallis-

Paul W. Miller, B. S., M. S., Ph. D., Assoc. Path. (nut disease inv.).

Fruit Disease Investigations—Continued.
FIELD HEADQUARTERS—Continued.

Virginia:

East Falls Church-

J. R. Christie, B. S., M. S., Assoc. Nematol. (small fruit inv.).

Rosslyn (Arlington Exp. Farm)— Herbert J. Dodd, Asst. Sci. Aid (misc. fruit disease and breeding inv.).

Wisconsin-Madison:

Albert J. Riker, A. B., A. M., Ph. D., Agt. (crown gall inv.).

Earl M. Hildebrand, B. S., M. S., Agt. (crown gall inv.).

# Diseases of Truck Crops and Ornamentals.

Leonard L. Harter, A. B., M. S., Ph. D., Sr. Path. (sweetpotato and bean diseases).

E. S. Schultz, B. S., M. S., Ph. D., 8r. Path. (potato diseases and curly top of vegetables).

Freeman Weiss, B. S., Ph. D., Path. (diseases of ornamental plants).

Charles Drechsler, B. S., M. S., Ph. D., Path. (taxonomy of fungi).

Walter P. Raleigh, B. S., Ph. D., Assoc. Path. (potato diseases).

Lucia McCulloch, B. S., Assoc. Path. (diseases of ornamental plants).

Florence Hedges, A. B., Assoc. Path. (bean diseases).

William J. Zaumeyer, B. S., M. S., Ph. D., Assoc. Path. (bean diseases).
Lillian C. Cash, A. B., Asst. Path.

(potato diseases). Edgar L. Evinger, B. S., M. S., Jr. Path.

(diseases of ornamental plants).
W. A. Whitney, B. S., Jr. Path. (sweet-

potato and bean diseases). C. Fred Andrus, A. B., Jr. Path. (bean

diseases). Lester E. Barrett, LL. B., LL. M., M. P. L., Sci. Aid (culture media preparation).

Thelma B. Post,\* A. B., M. A., Sci. Aid (diseases of ornamental plants).

FIELD HEADQUARTERS-

#### California:

Berkeley-

Michael Shapovalov, A. B., M. S., Sr. Path. (tomato and other vegetable crop diseases).

Chula Vista-

Ivan C. Jagger, B. S., M. S., Sr. Path. (lettuce and other vegetable crop diseases).

Norman Chandler, B. S., Jr. Plt. Breeder (lettuce and other regetable crop diseases).

Los Angeles-

Howard G. MacMillan, Ph. B., M. S., Ph. D., Sr. Path. (fusarium diseases of vegetables).

Diseases of Truck Crops, etc.—Continued.

FIELD HEADQUARTERS-Continued.

Colorado-Greeley:

Lawrence A. Schaal, B. S., M. S., Asst. Path. (potato diseases).

Idaho-Twin Falls:

W. W. Tracy. B. S., Assoc. Agron. (curly top diseases of vegetables). Maine—Presque Isle:

Malcolm F. McIntyre, Agent (potato diseases).

New York-Ithaca:

Philip Brierley, A. B., M. S., Asst. Path. (diseases of ornamental plants).

Frank A. Haasis, B. S., Agt. (diseases of ornamental plants).

Oregon:

Corvallis-

Bliss F. Dana, B. S., M. S., Path. (curly top disease of vegetables). Theodore P. Dykstra, B. S., M. S., Asst. Path. (potato diseases).

F. P. McWhorter, B. S., M. S., Ph. D., Agt. (diseases of ornamental plants).

Horace H. Millsap, Agt. (diseases of ornamental plants).

Hermiston-

Andrew Steiner, Agt. (curly top diseases of vegetables).

South Carolina-Charleston:

Wm. D. Moore, B. S., M. S., Ph. D., Assoc. Path. (bean and pea diseases).

Utah-Logan:

H. L. Blood. B. S., M. S., Ph. D., Agt. (tomato diseases).

Virginia—Rosslyn (Arlington Exp. Farm):

H. B. Walker, Under Scien. Helper. Wisconsin—Madison:

John C. Walker, B. S., M. S., Ph. D., Agt. (onion and cabbage discases). Lester M. Blank, B. A., M. S., Ph. D., Asst. Path. (onion and cabbage

diseases).
Russell A. Larson, B. A., M. S.,
Ph. B., Agt. (onion and cabbage
diseases).

Plant Physiology.

Frank L. Goll, Sr. Physiol.

H. Hasselbring, B. S., Ph. D., Physiol.

K. S. Markley, B. S., M. S., Ph. D., Assoc. Biochem.

Pathological Laboratory.

Edna H. Fawcett, B. L., Asst. Path. Agnes J. Quirk, Sr. Sci. Aid.

# DIVISION OF MYCOLOGY AND DISEASE SURVEY

Cornelius L. Shear, B. S., A. M., Ph. D., Prin. Path., in charge.

Mycological Collections.

John A. Stevenson, B. S., Sr. Mycol., in charge.

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Mycological Collections-Continued.

Vera K. Charles, A. B., Assoc. Path.
William W. Diehl, B. A., M. S., Assoc.
Path.

Anna E. Jenkins, B. A., M. S., Ph. D., Assoc. Path.

Edmund B. Lambert, B. S., M. S., Ph. D., Assoc. Path.

Edith K. Cash, A. B., Asst. Path.

\_\_\_\_, Jr. Mycol.

Harriet M. Daly,\* Asst. Sci. Aid. Leston R. Fate, B. A., Asst. Sci. Aid. Virginia C. Marquette, Jr. Lib. Asst. Josie B. Dishman,\* Jr. Sci. Aid. Edna M. Ermold, A. B., Jr. Sci. Aid.

Plant Disease Survey.

Neil E. Stevens. A. B., A. M., Ph. D., Sr. Path., in charge.

G. Hamilton Martin, B. S. F., M. S., Asst. Path.

Jessie I. Wood, A. B., A. M., Asst. Path. Nellie W. Nance, A. B., Sr. Sci. Aid. Helen C. Nichols, B. S., Jr. Sci. Aid.

### NATIONAL ARBORETUM

Frederick V. Coville, A. B., D. Sc., Prin. Bot., acting dir.

### DIVISION OF NEMATOLOGY

N. A. Cobb, B. S., Ph. D., Prin. Nematol., in charge.

Free-Living, Plant-Infesting, and Insect-Infesting Nemas.

festing Nemas.
G. Steiner, B. S., M. A., Ph. D., Sr. Nematol.

Gerald Thorne, B. S., M. S., Assoc. Nematol.

Edna M. Buhrer, A. B., Jr. Nematol.
Corinne Cooper, A. B., Jr. Nematol.
Grace S. Richey,\* A. B., Jr. Nematol.
Helen H. Swanger,\* A. B., Jr. Nematol.
Charles B. Bateman, Sr. Lab. Mech.
Martin L. Harrison, Sr. Lab. Mech.
Florence E. Albin,\* Sci. Aid.
Josephine F. Danforth,\* Sci. Illustr.
Civella A. Brooks,\* Jr. Sci. Aid.

Eunice R. Harveycutter,\* Jr. Sci. Aid. FIELD HEADQUARTERS.

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Margaret N. Corder, Jr. Sci. Aid. Virginia—East Falls Church:

J. R. Christie, B. S., M. S., Assoc. Nematol.

Mary L. Crossman, A. B., M. A., Jr. Nematol,

Rowena R. Le Hew.\* B. S., Jr. Nematol.

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S. J. Ethridge, Agt.

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Charles W. Pittard, Agt.

Oliver V. Purvis, Agt.

Jonathan N. Rumph, Agt.

# Dewcy L. Varmette, Chief Sci. Aid. DIVISION OF SEED INVESTIGATIONS

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Eben H. Toole, A. B., A. M., Ph. D., Phys.ol.

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Julian E. Smith, Agt.

Joseph T. Stewart, Agt.

John B. Williams, B. S., Agt.

Emma F. Sirrine, B. S., M. S., Assoc. Bot. Albina F. Musil, A. B., Asst. Bot.

Alice M. Andersen, A. B., A. M., Jr. Physiol.

Mildred Pladeck, B. S., M. S., Jr. Bot. Helen A. Anderson, B. A., Jr. Bot. Nelle B. Wilkinson, Ph. B., Jr. Bot. Frankie J. Mann, A. B., Jr. Bot.

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Indiana-Lafayette :

Regina B. Schulte, A. B., Asst. Bot. Missouri—Columbia:

Clara Fuhr, B. S., M. A., Asst. Bot.

Oregon-Corvallis:

Grace M. Cole, A. B., Asst. Bot.

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Ernst Artschwager, B. S., Ph. D., Path.
————————, Path.

H. B. Cowgill, B. A., M. S., Assoc. Agron. Ruth C. Starrett,\* A. B., M. A., Asst. Cytol. James F. Brewer, Botanical Artist. H. A. Kuyper, Prin. Translator.

#### Sugar-Beet Investigations.

G. H. Coons, A. B., A. M., Ph. D., Prin. Path.

#### Sugar-Beet Investigations-Continued.

(1) Sugar-Beet Pathology.

G. H. Coons, A. B., A. M., Ph. D., Prin, Path.

J. E. Kotila, B. S., M. S., Ph. D., Path.

H. A. Elcock, B. S., M. S., Asst.

(2) Sugar-Beet Agronomy.

A. W. Skuderna, B. S., Prin. Agron.

(3) Curly-Top Investigations.

Eubanks Carsner, B. A., M. S., Ph. D., Sr. Path.

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Riverside-

Eubanks Carsner, B. A., M. S., Ph. D., Sr. Path. N. J. Giddings, B. S., M. S., Ph. D., Sr. Path.

C. W. Bennett, B. S., M. S., Ph. D., *Path*.

J. M. Fife, B. S., M. A., Ph. D., *Biochem*.

Charles Price, B. S., Assoc. Agron.

C. F. Lackey, B. S., Asst. Path.

Glenn E. Gillespie, B. S., Sci. Aid.

Colorado:

Fort Collins--

Dewey Stewart, B. S., M. S., Assoc. Path.

H. E. Brewbaker, B. S., M. S., Ph. D., Assoc. Agron.

Rocky Ford-

G. W. Deming, B. S., Asst.

H. W. Bockstahler, B. S., M. S., Jr. Path.

Idaho-Twin Falls:

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J. M. Wallace, B. S., M. S., Ph. D., Assoc. Path.

C. C. Lowe, B. S., Asst. Agron.

A. M. Murphy, B. S., Sci. Aid. Michigan—East Lansing:

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E. E. Down, B. S., M. Agr.,

H. L. Kohls, B. S., M. S., Agt.

#### Sugar-Beet Investigations-Continued.

(3) Curly-Top Investigations-Contd. FIELD HEADQUARTERS-Continued.

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S. M. Raleigh, B. S., Agt.

E. L. LeClerg, B. S., M. S., Asst. Path.

Nebraska-Scottsbluff:

S. B. Nuckols, B. S., A. M., Assoc. Agron.

New Mexico-State College: J. C. Overpeck, B. S., M. S., Agt.

Utah:

Logan-

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L. M. Pultz, B. S., M. S., Ph. D., Assoc. Physiol. F. A. Abegg, B. S., M. S.,

Ph. D., Assoc. Genet. F. G. Larmer, B. S., M. S., Asst. Path.

-, Assoc. Agron. Clifton H. Smith, B. S., M. S., Sci. Aid.

Virginia-Rosslyn (Arlington Exp. Farm):

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(1) Sugarcane Pathology.

R. D. Rands, B. S., M. S., Ph. D., Sr. Path.

J. I. Lauritzen, B. S., Ph. D., Sr. Physiol.

Ernest Dopp, B. A., M. A., Assist. Path.

(2) Sugarcane Agronomy. George Arceneaux, B. S., Agt.

(3) Sugarcane Breeding.

G. B. Sartoris, B. S., M. S., Ph. D., Path.

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B. A. Belcher, B. S., M. S., Asst. Agron.

Louisiana-Houma:

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C. C. Krumbhaar, Agt.

I. E. Stokes, B. S., Agt. Ralph B. Bisland, B. S., Agt. Eaton M. Summers, B. S.,

M. S., Asst. Path.

#### Sugarcane Investigations-Continued.

(3) Sugarcane Breeding-Continued. FIELD HEADQUARTERS-Continued.

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North Carolina:

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West Virginia-Lakin:

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### Maryland Tobacco Production Investigations (Field).

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### Dark Air-Cured Tobacco Production Investigations (Field).

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Isme A. Hoggan, A. B., M. S., Ph. D., Agt.

#### Physiology and Nutrition of the Tobacco Plant.

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Randolph E. B. McKenney, B. S., M. S., A. M., Ph. D., Assoc. Path.

Physiology and Nutrition of the Tobacco Plant-Continued.

J. D. Bowling, jr., B. S., Asst. Biochem. G. W. Harris, Prin. Sci. Aid.

Gordon W. Fant, B. S., M. S., Asst. Sci. Aid.

Effect of Length of Day on Plant Growth.

H. A. Allard, B. S., Sr. Physiol.

C. W. Bacon, A. B., A. M., Ph. D., Assoc. Physiol.

R. A. Steinberg, B. S., M. A., Ph. D., Asst. Physiol.

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Port Inspection—Continued.

FIELD HEADQUARTERS-Continued.

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Harry Sargent, B. S., Asst. Pl. Quar. Insp.

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F. O. Dodd, B. S., Jr. Pl. Quar. Insp.

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H. G. Frane, B. S., Jr. Pl. Quar. Insp.

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Pablo Ortiz, B. S., Jr. Pl. Quar. Insp. P. X. Peltier, B. S., M. S., Jr.

Pl. Quar. Insp. A. O. Plummer, B. S., Jr. Pl.

Quar. Insp.

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Rouses Point:

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North Carolina-Wilmington:

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Oregon-Portland:

T. J. Baker, A. B., Asst. Pl. Quar. Insp.

Pennsylvania-Philadelphia:

Max Kisliuk, jr., B. S., M. S., Pl. Quar. Insp., in charge.

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C. N. Partington, B. S., Jr. Pl. Quar.

Insp. J. A. Ramos, B. S., Jr. Pl. Quar.

Insp. A. B. Wells, B. A., B. S., Jr. Pl. Quar. Insp.

South Carolina-Charleston:

Geraldus Gay, B. S., Asst. Pl. Quar.

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R. L. Trigg, B. S., Asst. Pl. Quar. Insp.

Galveston-

L. R. Dorland, B. S., Assoc. Pl. Quar. Insp.

Houston-

H. C. Millender, Assoc. Pl. Quar. Insp.

Port Arthur-

C. F. Trotter, Asso. Pl. Quar. Insp.

Virginia-Norfolk:

M. C. Rich, B. A., Asst. Pl. Quar. Insp., in charge.

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Washington:

Bellingham-

W. R. Shinn, B. S., Jr. Pl. Quar. Insp.

Seattle-

A. G. Webb, B. S., Pl. Quar. Insp., in charge.

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F. A. Johnston, B. S., Pl. Quar. Insp., in charge.

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J. E. Downs, B. S., Jr. Pl. Quar. Insp.

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W. J. Douglass, B. S., Jr. Pl. Quar. Insp., in charge.

C. L. Ritchie, B. S., Jr. Pl. Quar. Insp.

# Mexican Border Inspection-Continued.

FIELD HEADQUARTERS-Continued. Arizona-Continued.

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B. M. Ault, B. S. Jr. Pl. Quar. Insp.

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Sasabe-

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Quar. Insp., in charge. H. W. Capps, B. S., Jr. Pl. Quar.

T. P. Chapman, B. S., Jr. Pl. Quar. Insp.

San Ysidro-

Leroy Schoening, B. S., Asst. Pl. Quar. Insp., in charge.

J. F. Altstaetter, B. S., Jr. Pl. Quar. Insp.

New Mexico-Columbus:

L. A. Roberts, B. S., Jr. Pl. Quar. Insp.

#### Texas:

Brownsville-

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F. E. Swan, B. S., Asst. Pl. Quar. Insp.

G. F. Callaghan, B. S., Jr. Pl. Quar. Insp.

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M. S. Mirimanian, Jr. Pl. Quar. Insp.

C. W. Shockley, B. S., Jr. Pl. Quar. Insp.

J. D. Smith, B. S., Jr. Pl. Quar. Insp.

J. W. Stanton, B. S., Jr. Pl. Quar. Insp.

J. P. Williamson, B. S., Jr. Pl. Quar. Insp.

#### Mexican Border Inspection-Continued. FIELD HEADQUARTERS-Continued.

Texas-Continued.

Del Rio-

H. M. Cely, B. S., Asst. Pl. Quar. Insp., in charge. W. C. Edgeworth, B. S., Jr. Pl.

Quar. Insp. E. L. Talbert, B. S., Jr. Pl. Quar.

Insp.

Eagle Pass-

J. B. R. Leary, B. S., Assoc. Pl. Quar. Insp., in charge.

M. M. Richardson, Asst. Pl. Quar. Insn.

G. H. Russell, Asst. Pl. Quar. Insp. O. L. Cook, B. S., Jr. Pl. Quar.

Insp.

W. C. Goolsby, B. S., Jr. Pl. Quar. Insp.

R. R. Roberts, B. S., Jr. Pl. Quar. Insp.

J. B. Zuck, B. S., Jr. Pl. Quar. Insp.

El Paso-

T. A. Arnold, B. S., Assoc. Pl. Quar. Insp., in charge.

C. P. Daley, B. S., Asst. Pl. Quar. Insp.

A. H. Greer, B. S., Asst. Pl. Quar. Insp.
R. A. 'Alexander, B. S., Jr. Pl.

Quar. Insp.

H. A. Berrier, B. S., Jr. Pl. Quar. Insp.

H. R. Conway, B. S., Jr. Pl. Quar.

W. A. Harvison, B. S., Jr. Pl. Quar. Insp.

C. M. Locke, B. S., Jr. Pl. Quar.

J. R. Nichols, B. S., Jr. Pl. Quar. Insp.

H. T. Pinto, B. S., Jr. Pl. Quar.

Edward Smith, B. S., Jr. Pl. Quar. Insp.

Fabens-

W. R. Sudduth, B. S., Asst. Pl. Quar. Insp., in charge.

C. F. Haller, B. S., Jr. Pl. Quar. Insp.

Hidalgo-

J. M. Singleton, B. S., Asst. Pl. Quar. Insp., in charge.

I. W. Berryhill, B. S., Jr. Pl. Quar.

A. L. Williamson, B. S., Jr. Pl. Quar. Insp.

Laredo-

V. J. Shiner, B. S., Assoc. Pl. Quar. Insp., in charge.

B. C. House, B. S., Asst. Pl. Quar. Insp.

R. C. Bondy, B. S., Jr. Pl. Quar. Insp.

Mexican Border Inspection-Continued.

FIELD HEADQUARTERS-Continued.

Texas-Continued.

Laredo-Continued.

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V. O. Miller, B. S., Jr. Pl. Quar. Insp.
G. A. Pfaffman, B. S., Jr. Pl.

Quar. Insp.

B. P. Stewart, B. S., Jr. Pl. Quar. Insp.

M. G. Vinzant, B. S., Jr. Pl. Quar.

H. R. Cary, Pr. Fumigation Mech. (Thayer International Mercedes Bridge)-

L. A. Frost, Jr. Pl. Quar. Insp., in charge.

E. P. Reagan, B. S., Jr. Pl. Quar. Insp.

Presidio-

R. B. Lattimore, B. S., Asst. Pl. Quar. Insp., in charge.

J. H. Russell, B. S., Jr. Pl. Quar. Insp.

Rio Grande City-

A. A. Stalmach, A. B., Asst. Pl. Quar. Insp.

Roma-

R. B. Haller, Asst. Pl. Quar. Insp., in charge.

K. E. Miller, B. S., Jr. Pl. Quar. Insp.

V. L. Pearson, B. S., Jr. Pl. Quar.

Ysleta-

B. R. Anderson, B. S., Asst. Pl. Quar. Insp., in charge.

A. E. Archer, B. S., Jr. Pl. Quar. Insp.

Zapata-

Geo. M. Jones, B. S., Asst. Pl. Quar. Insp., in charge. E. L. Friday, B. S., Jr. Pl. Quar.

Hawaii Inspection. Honolulu-

H. F. Willard, B. S., Sr. Ent., in charae.

J. T. Watt, B. S., Asst. Pl. Quar. Insp.

Porto Rico Inspection.

Richard Faxon, B. S., Assoc. Pl. Quar. Insp., in charge.

Mayaguez-

A. G. Harley, B. S., Asst. Pl. Quar. Insp.

San Juan-

Richard Faxon, B. S., Assoc. Pl. Quar. Insp., in charge.

C. G. Anderson, B. S., M. S., Jr. Pl. Quar. Insp.

N. O. Berry, B. S., Jr. Ent.

A. S. Mills, B. S., Jr. Pl. Quar. Insp.

R. G. Oakley, B. S., Jr. Pl. Quar. Insp.

Quarantine Station, District of Columbia. Peter Bisset, Sr. Hort., in charge.

Norman Perrine, Ph. C., P. D., Assoc. Chem.

W. B. Wood, B. S., Chief Insp.

R. G. Cogswell, A. B., Asst. Pl. Quar. Insp.

H. Y. Gouldman, B. S., Asst. Pl. Quar. Insp.

D. P. Limber, B. S., M. S., Asst. Pl. Quar. Insp.

C. E. Prince, jr., B. S., Asst. Pl. Quar. Insp.

W. I. Whiton, B. S., Asst. Pl. Quar. Insp.

L. L. Spessard, A. B., M. S., Asst. Pl. Quar. Insp.

#### DOMESTIC PLANT QUARANTINES

For which no separate units have been organized

S. B. Fracker, A. B., M. S., Ph. D., Prin. Pl. Quar. Admin., in charge.

White-Pine Blister Rust.

District of Columbia-Washington:

Maude A. Thompson, Asst. in Domestic Plt. Quar.

FIELD HEADQUARTERS.

Washington-Spokane:

C. R. Stillinger, A. B., M. S., Assoc. Path. in charge, quarantine enforcement in Pacific Northwest.

Transit Inspection.

R. A. Sheals, B. S., Assoc. Pl. Quar. Insp. H. J. Conkle, B. S., Jr. Pl. Quar. Insp. FIELD HEADQUARTERS.

Illinois—Chicago:

J. M. Corliss, Agt., in charge, Central States.

J. M. Moran, Agt.

J. T. Scott, Agt.

Massachusetts—Boston:

E. J. McNerney, Agt.

Minnesota—St. Paul:

G. W. Nelson, B. S., Agt.

Missouri—St. Louis:

Oliver J. Yoder, B. S., Jr. Pl. Quar. Insp.

New York-New York:

C. B. Beamer, B. S., Agt., in charge. Gray H. Curtis, Agt.

Phony Peach Disease.

FIELD HEADQUARTERS.

Georgia—Atlanta:

G. W. R. Davidson, Agt., in charge. M. E. Connolly, Agent.

R. N. Dopson, jr., B. S., Agt.

# PINK BOLLWORM AND THURBERIA WEEVIL

(Hdqrs., San Antonio, Tex.)

R. E. McDonald, Prin. Admin. Off., in charge.

F. S. Puckett, B. S., Sr. Admin. Off. C. M. Fox, Admin. Off. G. G. Harris, B. S., Asst. Pl. Quar. Insp.

G. C. Bond, LL. B., Asst. Pl. Quar. Insp. J. N. Todd, B. S., M. S., Jr. Pl. Quar. Insp.

R. A. Vickery, B. A., M. A., Asst. Ent.

Salt River Valley Quarantine District (Hdqrs., Phoenix, Ariz.).

H. B. Prickett, Asst. Pl. Quar. Insp., in charge.

W. F. Rice, Asst. Pl. Quar. Insp.

W. E. Conn, B. S., Asst. Pl. Quar. Insp. B. C. Graham, B. S., Asst. Pl. Quar. Insp. P. L. Netterville, B. S., Asst. Pl. Quar.

Insp. G. B. Ray, B. S., Asst. Pl. Quar. Insp.

J. D. Waugh, B. S., Asst. Pl. Quar. Insp. V. Curtis, B. S., Jr. Pl. Quar. Insp.

Dean Dale, B. S., Jr. Pl. Quar. Insp.

J. A. Downs, B. S., Jr. Pl. Quar. Insp. F. V. Irvin, B. S., Jr. Pl. Quar. Insp.

B. B. Jones, Jr. Pl. Quar. Insp.

W. F. Senette, B. S., Jr. Pl. Quar. Insp. C. C. Weigle, B. S., Jr. Pl. Quar. Insp.

R. L. Tucker, B. S., Jr. Mech. Engr.

# Western Quarantine District (Hdqrs., El Paso, Tex.).

J. S. Brock, B. S., Pl. Quar. Insp., in charge.

L. F. Curl, B. S., Asst. Pl. Quar. Insp.

J. B. Moore, B. S., Asst. Pl. Quar. Insp.R. R. Rosa, B. S., Asst. Pl. Quar. Insp.

Ivan Shiller, B. S., M. S., Asst. Pl. Quar. Insp.

J. C. Woodward, B. S., Asst. Pl. Quar. Insp.

J. I. Cowger, B. S. A., Jr. Pl. Quar. Insp.J. N. Crisler, B. S., Jr. Pl. Quar. Insp.

K. A. Gallant, B. S., Jr. Pl. Quar. Insp.

Western Quarantine District (Hdqrs., Tucson, Ariz.).

S. D. Smith, Assoc. Pl. Quar. Insp., in charge.

W. E. Ayers, Asst. Pl. Quar. Insp.

G. F. McLain, B. S., Jr. Pl. Quar. Insp.

# Eastern Quarantine District (Hdqrs., Alpine, Tex.).

D. M. McEachern, B. S., Asst. Pl. Quar. Insp., in charge.

G. W. Chowns, B. S., Asst. Pl. Quar. Insp.

L. D. Harris, B. S., Asst. Pl. Quar. Insp.

W. B. Rogers, Asst. Pl. Quar. Insp.

O. L. Walton, B. S., Asst. Pl. Quar. Insp. E. L. Wilde, B. S., Asst. Pl. Quar. Insp.

H. L. Alford, B. S., Jr. Pl. Quar. Insp. P. C. Avery, B. S. A., M. S. A., Jr. Pl.

P. C. Avery, B. S. A., M. S. A., Jr. P. Quar. Insp.

F. D. Bittner, B. S., Jr. Pl. Quar. Insp.

J. M. Cobb, B. S., Jr. Pl. Quar. Insp.

L. B. Coffin, B. S., Jr. Pl. Quar. Insp.

R. L. Eberhard, Jr. Pl. Quar. Insp.

J. C. Gay, B. S., Jr. Pl. Quar. Insp. H. J. Henderson, B. S., Jr. Pl. Quar.

Insp. A. K. Inman, B. S., Jr. Pl. Quar. Insp.

W. C. Maxwell, B. S., Jr. Pl. Quar. Insp.

Eastern Quarantine District-Continued.

S. R. Morris, B. S., Jr. Pl. Quar. Insp.

G. E. Orr, B. S., Jr. Pl. Quar. Insp.

S. E. Poe, B. S. A., Jr. Pl. Quar. Insp.

W. W. Rester, B. S., Jr. Pl. Quar. Insp. F. M. Wilson, Jr. Pl. Quar. Insp.

Scouting (Hdqrs., San Antonio, Tex.).

R. W. White, B. S., Pl. Quar. Insp., in charge.

F. I. Jeffrey, B. S., Asst. Pl. Quar. Insp. I. B. Rutledge, B. S., Asst. Pl. Quar. Insp.

W. E. von Rosenberg, B. S., Asst. Pl. Quar. Insp.

J. H. Adams, jr., B. S., Jr. Pl. Quar. Insp.

T. R. Adkins, B. S., Jr. Pl. Quar. Insp.

C. H. Bergeron, B. S. Jr. Pl. Quar. Insp.

Cason, B. S., Jr. Pl. Quar. Insp.

K. R. Elliott, B. S., Jr. Pl. Quar. Insp.

W. T. Gurley, B. S., Jr. Pl. Quar. Insp. O. F. Haslbauer, B. S., Jr. Pl. Quar.

Insp. E. Hobbs, B. S., M. S., Jr. Pl. Quar.

Insp. C. H. Hoult, A. B., LL. B., Jr. Pl. Quar. Insp.

J. H. Miller, B. S., Jr. Pl. Quar. Insp.

C. L. Parnell, B. S., Jr. Pl. Quar. Insp. J. S. Smith, B. S., Jr. Ent.

L. A. West, Jr. Pl. Quar. Insp.

J. S. Wilson, B. S., Jr. Pl. Quar, Insp.

J. L. Wood, B. S., Jr. Pl. Quar. Insp. W. E. Gassett, Sr. Sci. Aid.

#### EUROPEAN CORN BORER AND JAPANESE BEETLE

(General hdgrs., South Norwalk, Conn. European corn borer work: Hdgrs .--Eastern section, Boston, Mass.; Central section, South Norwalk, Conn.; Western section, Springfield, Ohio. Japanese beetle work: South Norwalk, Conn.)

L. H. Worthley, Prin. Admin. Off., in charge.

H. T. Cronin, LL. B., Sr. Admin. Off.

H. C. Ameigh, A. B., LL. B., Admin. Off. Jefferson Thomas, Agt., in charge informa-

H. A. Burkmeyer, Supt. Garage.

Eastern Section European Corn Borer and Japanese Beetle Work in Eastern Massachusetts and Rhode Island.

Massachusetts-Boston:

R. S. Clifton, Sr. Admin. Asst., in charge.

C. W. Lewis, B. S., Prin. Sci. Aid.

A. Neill, Agt., asst. in charge.

W. J. Powers, Field Supvr. in Insect Control.

Central Section European Corn Borer and Japanese Beetle Work in Western Massachusetts, Connecticut, and New York City.

Connecticut-South Norwalk:

H. N. Bartley, B. S., Ent., in charge. G. P. Babson, Prin. Field Aid.

Central Section European Corn Borer and Japanese Beetle Work, etc .-- Continued.

Connecticut-South Norwalk-Continued.

T. M. Cannon, Sr. Sci. Aid.

F. L. Fall, Prin. Field Aid.

J. P. Johnson, B. S., Agt.

M. J. Kelly, Field Supvr. in Insect Control.

J. S. Stockbridge, Field Supvr. in Inscet Control.

New Jersey-Rutherford:

H. V. Hotchkin, Agt., in charge.

New York City:

Leland Wolfe, Agt. in charge, European Corn Borer.

C. H. Zimmer, Agt. in charge, Japanese Beetle.

Western Section European Corn Borer.

Ohio-Springfield:

E. G. Brewer, Sr. Admin. Off., in charge.

O. P. Norris, Jr. Admin. Off.

N. A. Dunlap, B. S., Jr. Pl. Quar. Insp.

J. C. Silver, B. S., Asst. Ent.

J. H. Harman, B. S., Assoc. Ent.

C. O. Larrabee, Chief Field Aid.

J. W. Enwright, Prin. Field Aid.

T. B. Heald, Field Super. in Insect Control.

Arthur Viall, Field Super. in Insect Control.

Japanese Beetle Work (Except in New England and New York City).

C. W. Stockwell, Sr. Admin. Off., in charge.

O. K. Courtney, B. S., Assoc. Pl. Quar. In sp.

T. C. F. Cronin, B. S., Asst. Pl. Quar.

V. A. Johnson, B. S., Asst. Pl. Quar. Insn.

R. W. Sherman, B. S., Asst. Pl. Quar.

W. L. Caskey, B. S., Jr. Pl. Quar. Insp. F. L. O'Rourke, B. S., Jr. Ent.

W. C. Armstrong, Field Super. in Insect Control.

W. N. Dobbs, Field Supvr. in Insect Control. F. G. Winn, Field Supvr. in Insect Con-

trol.

W. E. Cranston, Agt., in charge of quar. in Del.

J. K. Gould, Agt., in charge of quar. in

G. K. Handle, Agt., in charge of quar. in N. J.

#### MOTHS

(Hdqrs., Greenfield, Mass.)

A. F. Burgess, M. S., Prin. Ent., in charge. S. S. Crossman, B. S., Sr. Ent.

H. B. Dalton, Jr. Admin. Off.

Quarantine and Inspection.

J. N. Summers, B. S., Ph. D., Admin. Off. F. W. Graves, jr., Sr. Admin. Asst.

#### Quarantine and Inspection-Continued.

- W. J. Ahearn, Sr. Sci. Aid.
- P. S. Coffin, Sr. Sci. Aid.
- C. M. Emerson, Sr. Sci. Aid.
- G. J. Galvin, Sr. Sci. Aid.
- D. Harrington, Sr. Sci. Aid.
- J. Keefe, Sr. Sci. Aid.
- F. L. Keene, Sr. Sci. Aid.
- R. W. Kennedy, Sr. Sci. Aid.
- J. F. Keough, Sr. Sci. Aid.
- J. F. McDevitt, Sr. Sci. Aid.
- C. A. Manchester, Sr. Sci. Aid.
- P. H. Meagher, Sr. Sci. Aid.
- G. A. Miller, Sr. Sci. Aid.
- J. F. Murray, Sr. Sci. Aid.
- I. B. Newbegin, Sr. Sci. Aid.
- L. H. Noble, Sr. Sci. Aid.
- J. J. Roach, Sr. Sci. Aid. W. Sarsfield, Sr. Sci. Aid.
- A. C. Ward, Sr. Sci. Aid.
- H. I. Winchester, Prin. Sci. Aid.

#### Scouting and Extermination.

- H. L. Blaisdell, Sr. Admin, Off.
- L. E. Gibson, B. S., Sr. Admin. Asst.
- H. A. Ames, Sr. Admin. Asst.
- W. W. Bancroft, Prin. Sci. Aid.
- II. N. Bean, Prin. Sci. Aid.
- C. T. Davis, Prin. Sci. Aid.
- C. A. McIsaac, Prin. Sci. Aid.
- S. E. May, Prin. Sci. Aid. D. G. Murphy, Prin. Sci. Aid.
- M. J. Anderson, Field Supvr. in Insect Control.
- F. N. Bancroft, Field Supvr. in Insect Control.
- F. C. Flint, Field Super. in Insect Control.
- F. W. Graham, Field Super. in Insect Control.
- W. H. Hanley, Field Super. in Insect Control.
- H. H. Harkins, Field Supvr. in Insect
- G. N. Harris, Field Super. in Insect Con-
- R. M. Kittridge, Field Supvr. in Insect
- Control. F. C. McDonough, Field Supvr. in Insect
- E. R. Manning, Field Super. in Insect Control.
- W. J. Nestle, Field Supvr. in Insect Control.
- O. C. Otis, Field Supvr. in Insect Control.
- J. W. Regan, Field Supvr. in Insect Control.
- F. C. Rich, Field Supvr. in Insect Control.
- I. L. Bailey, Sr. Sci. Aid.
- W. A. Collins, Sr. Sci. Aid.

# MEXICAN FRUIT FLY

(Hdgrs., Harlingen, Tex.)

P. A. Hoidale, Sr. Pl. Quar. Insp., in charge.

- M. H. Ford, B. S., Assoc. Pl. Quar. Insp.
- B. M. Gaddis, Assoc. Pl. Quar. Insp.
- K. H. Townsend, Assoc. Pl. Quar. Insp. W. W. Decell, B. S., Asst. Pl. Quar. Insp.
- W. R. Heard, B. S. Asst. Pl. Quar. Insp. J. W. Patterson, B. S., Asst. Pl. Quar.
- Insp.E. F. Pepper, B. S., Asst. Pl. Quar. Insp.
- L. G. Plyler, B. S., Asst. Pl. Quar. Insp.
- Adolph Thomae, B. S., Asst. Pl. Quar. Insp.
- A. V. Smith, B. S., Asst. Pl. Quar. Insp.
- F. O. Swan, B. S. Asst. Pl. Quar. Insp.
- J. M. Dunham, B. S., Jr. Pl. Quar. Insp.
- R. V. Ray, B. S., Jr. Pl. Quar. Insp. T. R. Stephens, B. S., Jr. Pl. Quar. Insp.
- L. F. Greer, Sr. Pl. Quar. Aid.
- G .V. Harren, Sr. Pl. Quar. Aid.

#### DATE PALM SCALE ERADICATION

# (Hdgrs., Indio, Calif.)

- B. L. Boyden, A. B., Sr. Ent., in charge.
- A. J. Shamblin, Assoc. Hort.
- A. E. Cavanagh, Chief Sci. Aid.
- L. J. Padget, B. S., Jr. Pl. Quar. Insp.
- J. E. Tuckett, A. B., Jr. Pl. Quar. Insp.
- I. C. Caswell, Sr. Sci. Aid.
- G. F. Fulkerson, Sr. Sci. Aid.
- H. B. Ames, Sci. Aid.
- H. E. Bronson, Sci. Aid.
- W. N. Carl, Sci. Aid.
- M. E. Moore, Sci. Aid.
- C. T. Duncan, Jr. Sci. Aid.
- C. T. Owsley, Jr. Sci. Aid.
- Imperial Valley (Hdqrs., El Centro, Calif.). C. T. Cordill, Sci. Aid.

# Arizona (Hdqrs., Phoenix, Ariz.).

- C. H. Rothe, B. S., Asst. Pl. Quar. Insp.,
- in charge. R. C. Dickson, A. B., Jr. Pl. Quar. Insp.
- A. E. Frazier, B. S., Jr. Pl. Quar. Insp. Drew Jorgensen, B. S., M. S., Jr. Pl.
  - Quar. Insp.

#### TECHNOLOGICAL DIVISION

- Lon A. Hawkins, B. S., Ph. D., Prin. Physiol., in charge.
- A. G. Galloway, Assoc. Technol.

# FIELD HEADQUARTERS:

Texas:

R1 Paso-

- A. C. Johnson, Asst. Pl. Quar. Insp. W. T. Hunt, B. S., M. S., Jr. Pl.
- Quar. Insp. W. C. Baker, B. S., Jr. Pl. Quar.
- Insp. E. M. Dieffenbach, B. S., Asst. Mech. Engr.

Laredo-

J. M. Luckie, Agt.

### FRUIT FLY INVESTIGATIONAL WORK

Honolulu, Hawaii-

Orville C. McBride, B. S., M. S., Ent., in charge.

Chester B. Keck, B. S., M. S., Asst. Ent. Miyauooto McPhail, B. S., Asst. Ent. Kam Hu Lau, B. S., Jr. Chem. Engr. Ralph H, Marlowe, B. S., Sr. Sci. Aid. Honolulu, Hawaii—Continued.

Tai Hee Hong, B. A., M. S., Agt.

William H. Mitchell, jr., B. S., A. M.,

Ph. D., Agt.

Brazil and West Indies—
Charles E. Cooley, Pl. Quar. Insp.
Max Kisliuk, jr., B. S., M. S., Pl. Quar.
Insp.

### BUREAU OF PUBLIC ROADS

Thos. H. MacDonald, B. C. E., Dr. Engr., Chief.

P. St. J. Wilson, C. E., Chief Engr.

Carrie L. Fuller, LL. B., Admin. Asst.

Josephine C. Sweeney, Admin. Asst.

Augusta F. Johnston, Admin. Asst. (personnel).

Hilda E. Graff, LL. B., Prin. Clerk, in charge Mail and File Section.

# DIVISION OF CONTRACTS AND LAWS

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W. J. O'Leary, LL. B., Sr. Admin. Off.
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E. N. Miller, LL. B., Jr. Admin. Asst.

# DIVISION OF CONTROL

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Accounting Section.

E. R. Miller, Chief Acct.

Equipment and Supplies.

O. Engelmann, Admin. Off.

# DIVISION OF INFORMATION

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G. P. St. Clair, B. A., Assoc. Hwy. Engr.

Orrena L. Evans, Assoc. Libr. H. W. Hendley, Head Scient. Illus.

Mildred A. Wilson, B. S., Jr. Libr.

#### DIVISION OF MANAGEMENT

T. W. Allen, C. E., Chief.

Highway Construction Cost Studies.

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W. A. Blanchette, B. S. in C. E., Hwy. Engr.

C. R. Rogers, B. S. in C. E., Asst. Hwy. Engr.

T. C. Thee, B. S. in C. E., Asst. Hwy. Engr.

H. L. Aitken, B. S. in C. E., Jr. Hwy. Engr.

F. Anderlitch, B. S. in C. E., Jr. Hwy. Engr.

R. S. Anderson, B. C. E., Jr. Hwy. Engr.D. M. Beach, B. S. in C. E., Jr. Hwy. Engr.

#### Highway Construction Cost Studies-Contd.

A. H. Benesh, B. S. in C. E., Jr. Hwy Engr.

H. I. Berg, B. S. in C. E., Jr. Hwy. Engr.

V. T. Cairns, B. S. in C. E., Jr. Hwy Engr.

J. B. Dalhouse, B. S. in C. E., Jr. Hwy. Engr.

R. W. Edwards, B. S. in C. E., Jr. Hwy. Engr.

S. E. Farin, B. C. E., Jr. Hwy. Engr. F. B. Farrell, B. S. in C. E., Jr. Hwy. Engr.

D. L. Froerer, B. S. in A. E., Jr. Hwy. Engr.

 J. B. Hanson, B. C. E., Jr. Hwy. Engr.
 F. W. Haxton, B. S. in C. E., Jr. Hwy. Engr.

R. E. Hertel, B. C. E., Jr. Hwy. Engr.
S. T. Hitchcock, B. S. in C. E., Jr. Hwy. Engr.

F. L. Holloway, B. S. in C. E., Jr. Hwy. Engr.

W. B. Huffine, B. S. in C. E., Jr. Hwy. Engr.

C. F. Izzard, A. B. in C. E., Jr. Hwy. Engr.

N. L. James, B. S. in C. E., Jr. Hwy. Engr.

D. E. Jones, B. S. in C. E., Jr. Hwy. Engr.

P. Julian, B. S. in C. E., Jr. Hwy. Engr. E. H. Karrar, B. C. E., Jr. Hwy. Engr.

C. E. Larson, B. S. in C. E., Jr. Hwy. Engr.

D. W. Loutzenheiser, B. S. in C. E., Jr. Hwy. Engr.

N. E. MacDougall, B. S. in C. E., Jr. Hwy. Engr.

G. E. Marple, B. S. in C. E., Jr Hwy. Engr.

K. Moskowitz, B. S. in C. E., Jr. Hwy. Engr.

O. K. Norman, B. S. in C. E., Jr. Hwy. Engr.

Highway Construction Cost Studies—Contd. F. G. Orcutt, B. S. in C. E., Jr. Hwy.

Engr.

R. M. Phillips, B. S. in C. E., Jr. Hwy. Engr.

A. R. Rankin, B. S. in C. E., Jr. Hwy. Engr.

R. P. Rodgers, B. S. in C. E.,  $Jr.\ Hwy.\ Engr.$ 

N. T. Rykken, B. S. in C. E., Jr. Hwy. Engr.

J. F. Sullivan, B. S. in C. E., Jr. Hwy. Engr.

D. R. Tompkins, B. S. in C. H., Jr. Hwy. Engr.

F. C. Turner, B. S. in C. E. Jr. Hwy. Engr.

Highway Engineering Cost Studies.

J. L. Harrison, B. S. in C. E., Sr. Hwy. Engr.

Highway Maintenance Cost Studies.

# G. G. Clark, Sr. Hwy. Econ. DIVISION OF TESTS

E. F. Kelley, C. E., Chief.

H. M. Milburn, B. S. in Chem. Engr., Sr. Engr. of Tests.

A. L. Gemeny, C. E., Sr. Struct. Engr. L. N. Edwards, B. C. E., C. E., Sr. Hwy.

Bridge Engr.
G. E. Ladd, A. B., A. M., Ph. D., Assoc.
Econ. Geol.

Research on Bituminous Materials.

J. T. Pauls, B. S. in C. E., Sr. Hwy. Engr.

FIELD HEADQUARTERS.

Virginia—Rosslyn (Arlington Exp. Farm)

L. G. Carmick, B. S., Assoc. Chem.E. C. E. Lord, M. S., Ph. D., Assoc. Petrographer.

P. F. Critz, B. S. in C. E., Assoc. Hwy. Engr.

R. H. Lewis, B. S. in Chem., Assoc. Chem.

U. S. Fisher, B. S. in C. E., Assoc. Hwy. Engr.

H. L. Bosley, Asst. Materials Engr.
C. A. Carpenter, B. S. in C. E., Asst. Civil Engr.

E. L. Tarwater, Asst. Hwy. Engr. W. O'B. Hillman, B. S. in C. E., Jr. Hwy. Engr.

#### Research on Nonbituminous Materials.

F. H. Jackson, Sr. Engr. of Tests.

D. O. Woolf, B. S. in C. E., Assoc. Materials Engr.

D. G. Runner, A. B. in C. E., Asst. Materials Engr.

K. F. Shippey, B. S. in C. E., Jr. Hwy. Engr.

FIELD HEADQUARTERS.

Virginia—Rosslyn (Arlington Exp. Farm)

W. F. Kellermann, B. S. in C. E., Assoc. Materials Engr. Research on Nonbituminous Materials-Con.

FIELD HEADQUARTERS-Continued.

Virginia—Rosslyn—Continued.

J. F. Goode, B. S. in C. E., Jr. Hwy. Engr.

W. P. Privette, B. S. in C. E., Jr. Hwy. Engr.

E. A. Wilder, B. S. in C. E., Jr. Hwy. Engr.

#### Research on Road Subgrades.

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F. A. Robeson, B. S. in C. E., Jr. Hwy. Engr.

R. C. Thoreen, A. B., Jr. Hwy. Engr.
Research on Pavement Surface and Bridge
Design.

L. W. Teller, B. S. in C. E., Sr. Engr. of Tests.

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G. W. Davis, B. S. in C. E., Assoc. Engr. of Tests.

C. S. Haynes, Asst. Mech. Engr. E. C. Sutherland, B. S. in C. E.,

Asst. Civil Engr.
B. S. Brooks, B. E., Jr. Hwy. Engr.

H. D. Cashell, B. S. in C. E., Jr. Hwy. Engr.

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R. J. Lancaster, B. S. in C. E., Jr. Hwy. Engr.

R. C. Herner, Jr. Civil Engr.

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J. A. Sourwine, C. E., Sr. Hwy. Engr.

# Cooperative Highway Research (Field).

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J. T. Thompson, B. S. in E., Hwy. Research Spec.

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G. S. Vincent, B. S. in C. E., Hwy. Bridge Engr.

F. T. Stoddard, B. S. in M. and G., Assoc. Hwy. Engr.

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C. White, B. S. in C. E., Hwy. Bridge Engr.

N. S. Anderson, B. S. in E., Assoc. Hucy. Engr.

C. W. DeGinther, C. E., Assoc. Hwy. Bridge Engr.

H. C. Headley, Assoc. Hwy. Engr.

J. W. Martin, B. S. in C. E., C. E.,

Assoc. Hwy. Engr.
B. A. Scott, C. E., Assoc. Hwy. Engr.
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South Carolina-Columbia:

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S. A. Obenshain, B. S. in C. E., C. E., Assoc. Hwy. Engr.

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Hwy. Engr.

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E. R. Barton, Ph. B. in C. E., Asst. Hwy. Engr.

L. G. Grossman, B. S. in C. E., Asst. Hwy. Engr.

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B. F. Heidel, A. B., C. E., Sr. Hwy.

Engr.

A. E. McClure, C. E., Hwy. Engr.G. D. Ball, B. S. in C. E., Assoc. Hwy.

Engr.

B. P. Harrison, C. E., Assoc. Hwy. Engr.
N. D. McDowell, B. S. in C. E., Assoc.

Hwy. Bridge Engr.
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Hwy. Engr.
Harvey Stanley, Assoc. Struct. Engr.

H. F. Tripp, Asst. Hwy. Engr. J. E. Cook, jr., B. S. in C. E., Jr.

Hwy. Engr. North Carolina—Raleigh:

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W. I. Redmond, Asst. Hwy. Engr. Pennsylvania—Harrisburg:

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in charge.

Regional Office (Hdars, San Francisco Calif.)

Regional Office (Hdqrs., San Francisco, Calif.).
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J. S. Bright, B. S., in C. E., Prin. Hwy. Engr.

B. W. Matteson, B. S., Sr. Hwy. Engr.

Regional Office-Continued.

California-San Francisco-Continued.

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H. R. Angwin, B. S. in C. E., Sr. Hwy. Bridge Engr.

J. Moskowitz, Sr. Hwy. Engr.

F. L. Klein, Ph. B. in C. E., Hwy. Bridge Engr.

E. F. Ruggles, B. S. in C. E., Hwy. Engr.

N. F. McCoy, A. B., Assoc. Hwy. Engr.

F. R. Bonnickson, B. S. in C. E., Assoc. Hwy. Engr.

C. F. Dixon, Assoc. Hwy. Engr.

E. T. Larsen, C. E., Assoc. Hwy. Bridge Engr.

C. R. Black, B. S. in C. E., C. E., Assoc. Hwy. Bridge Engr.

A. A. Clausen, B. S. in C. E., Assoc. Hwy. Bridge Engr.

G. M. Williams, B. S. in C. E., Asst. Hwy. Engr.

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E. S. Wheeler, C. E., Prin. Hwy. Engr. District No. 1 (Hdqrs., Portland, Oreg.).

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B. F. Kitt, C. E., Assoc. Hwy. Engr. Samuel Cook, Asst. Hwy. Engr.

H. A. Stoddart, B. S. in C. E., Asst. Hwy. Engr.

Oregon-Portland (hdqrs. for dist.):

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F. E. Andrews, Sr. Hwy. Engr.
J. A. Elliott, A. B., B. S. in C. E.,
C. E., Sr. Hwy. Engr.

H. D. Farmer, B. S. in C. E., Sr. Hwy. Engr.

R. B. Wright, B. S. in C. E., Sr. Hwy. Bridge Engr.

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T. M. Davis, Hwy. Engr.

A. F. Morris, Hwy. Engr.

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R. E. Merrick, Assoc. Hwy. Engr.

W. G. Peters, B. S. in C. E., Assoc. Hwy. Engr.

J. B. Reher, Assoc. Hwy. Engr.

E. T. Saunders, Assoc. Hwy. Engr.

C. R. Short, B. S. in C. E., Assoc. Hwy. Engr.

B. F. Beezley, Asst. Hwy. Engr.

A. H. Benedict, B. S. in C. E., C. E., Asst. Hwy. Engr.

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Oregon-Portland-Continued.

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A. V. Emery, Asst. Hwy. Engr.

Jean Ewen, Asst. Hwy. Engr.

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C. G. Norris, Asst. Hwy. Engr.

C. G. Polk, B. S. in C. E., Asst. Hwy. Engr.

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W. R. F. Wallace, B. S. in C. E., Assoc. Hwy. Engr.

E. F. Strickler, Asst. Hwy. Engr.

V. Aldrich, B. S. in C. E., Jr. Hwy.

R. M. Rutledge, B. S. in C. E., Jr. Hwy. Engr.

V. G. Watson, B. S. in C. E., Jr. Hwy. Engr.

California-San Francisco (hdqrs. for dist.):

C. H. Sweetser, A. B. in C. E., Dist. Engr.

L. R. Brown, B. S. in C. E., C. E., Sr. Hwy. Engr.

E. C. Brown, C. E., Sr. Hwy. Engr. C. C. Morris, B. S. in C. E., Sr. Hwy. Engr.

C. G. Morrison, B. S. in C. E., Sr. Hwy. Engr.

J. D. Shaw, Sr. Hwy. Engr.

G. D. Whittle, B. S. in C. E., Sr. Hwy. Bridge Engr.

A. B. Brown, Mech. Engr.
D. L. MacBeath, Hwy. Engr.
R. Pearson, B. S. in C. E., Hwy. Bridge Engr.

H. S. Tolen, C. E., Hwy. Engr.

G. C. White, Hwy. Engr.

H. A. Alderton, jr., A. B. in C. E., Assoc. Hwy. Engr.

J. H. Brannan, Assoc. Hwy. Engr.

C. S. Bruning, Assoc. Hwy. Engr.

C. W. Dennison, B. S., Assoc. Hwy. Engr.

J. E. Jensen, Assoc. Hwy. Engr.

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District No. 2-Continued.

California-San Francisco-Continued.

F. B. Lessman, B. S. in C. E., Assoc. Hwy. Engr.

J. L. Mathias, B. S. in C. E., Assoc. Hwy. Engr.

W. H. Smith, B. S. in C. E., Assoc. Hwy. Engr.

R. Thirion, Assoc. Hwy. Engr.

W. J. Ward, B. S. in C. E., Assoc. Hwy. Engr.

W. P. Wesch, B. S. in C. E., Assoc. Hwy. Bridge Engr.

H. Broberg, B. S. in C. E., Asst. Hwy. Engr.

J. E. Applegate, B. S. in C. E., Asst. Hwy. Engr.

E. D. McLaughlin, B. S. in C E., Asst. Hwy. Bridge Engr.

C. S. Moore, B. S. in M. E., Asst. Hwy. Engr.

O. H. Swaney, B. S. in M. E., Asst. Hwy. Engr.

L. G. Watters, B. S. in C. E., Asst. Hwy. Engr.

R. D. Adams, B. S. in C. E., Jr. Hwy.

N. B. Baloff, B. S. in C. E., Jr. Hwy.

H. K. Church, B. S. in C. E., Jr. Hwy.

L. L. Clark, B. S. in C. E., Jr. Hwy. Engr.H. L. Clausen, B. C. E., Jr. Hwy.

Engr. S. F. Coffman, jr., B. S. in C. E., Jr.

Hwy. Engr. G. B. Criteser, B. S. in C. E., Jr. Hwy. Engr.

F. J. Dixon, B. S. in C. E., Jr. Hwy.

Engr. J. L. Fingado, A. B. in C. E., Jr.

Hwy. Engr. M. M. Flint, A. B. in C E., Jr. Hwy. Engr.

B. L. Giusto, B. S. in C. E., Jr. Hwy.

Earl Green, B. S. in E., Jr. Hwy.

H. T. Gunderson, B. S. in C. E., Jr. Hwy, Engr.

F. R. Hall, B. S. in C. E., Jr. Hwy. Engr.

L. S. Hedgpeth, B. S. in C. E., Jr. Hwy. Engr.

F. M. Johnson, B. S. in C. E., Jr. Hwy. Engr.

R. E. Jorgensen, B. S. in C. E., Jr. Hwy. Engr.

J. A. Killalee, B. S. in C. E., Jr. Hwy. Engr.

H. F. LaGrone, B. S. in C. E., Jr. Hwy. Engr.

W. J. Liddle, B. S. in C. E., Jr. Hwy. Engr.

District No. 2-Continued.

California-San Francisco-Continued.

Jack Mage, B. S. in C. E., Jr. Hwy. Engr.

T. M. Roach, B. S. in C. E., Jr. Hwy. Engr.

A. P. Simatovich, A. B. in E., Jr. Hwy. Engr.

J. N. Storrs, B. S. in C. E., Jr. Hwy. Engr.

R. E. Tarbet, B. S. in C. E., Jr. Hwy. Engr.

J. E. Wood, B. S. in C. E., Jr. Hwy. Engr.

H. H. Woodman, C. E., Jr. Hwy. Engr.

District No. 3 (Hdqrs., Denver, Colo.).

A. E. Palen, B. S. in C. E., Acting Dist. Engr. in charge.

Colorado—Denver (hdqrs. for dist.):

A. E. Palen, B. S. in C. E., Acting Dist. Engr.

A. V. Williamson, Sr. Hwy. Engr. L. F. Copeland, B. S. in C. E., Sr. Hwy.

Bridge Engr.
C. E. Learned, B. S. in C. E., Sr. Hwy.
Engr.

C. F. Capes, Hwy. Engr.

R. S. Corlew, Hwy. Engr.

W. H. Curwen, B. S. in C. E., Hwy. Engr.

L. A. Hamilton, Assoc. Hwy. Engr. B. B. Hauser, B. C. E., Assoc. Hwy.

B. B. Hauser, B. C. E., Assoc. Hwy. Engr.

R. W. James, C. E., Assoc. Hwy. Bridge Engr.
W. M. Jeffrey, B. S. in C. E., Assoc.

Hwy. Engr.

R. C. Jones, Assoc. Hwy. Engr.

 W. D. Ross, C. E., Assoc. Hwy. Engr.
 J. D. Slye, B. S. in C. E., M. S., Assoc. Hwy. Engr.

J. E. Williams, B. S. in C. E., Assoc. Hwy. Engr.

P. A. Bean, B. S. in C. E., Asst. Hwy. Engr.

H. E. Dalton, B. S. in A. E., Asst. Hwy. Engr.

R. W. Darling, Asst. Hwy. Engr.

D. M. Emrich, B. S. in Hydr., Asst. Hwy. Engr.

O. E. Gardner, Asst. Hwy. Bridge Engr. F. C. Hill, Asst. Hwy. Engr.

G. W. Hoffman, B. S. in C. E., Asst. Hwy. Engr.

J. G. Huckins, B. S. in C. E., Asst. Hwy. Engr.

F. M. Keller, B. S. in C. E., Asst. Hwy. Engr.

W. J. Keller, Asst. Hwy. Engr.

W. L. Lafferty, Asst. Hwy. Engr.

D. B. Ventres, B. S. in C. E., Asst. Hwy. Engr.

S. A. Wallace, Asst. Hwy. Engr.

W. W. West, B. S. in C. E., Asst. Hwy. Engr.

District No. 3-Continued.

Colorado-Denver-Continued.

W. H. Willesen, B. S. in A. E., Asst. Hwy. Engr.

R. P. Agnew, B. S. in C. E., Jr. Hwy. Engr.
 C. D. Beach, B. S. in C. E., Jr. Hwy.

Engr.

J. W. Courter, B. S. in C. E., Jr. Struct. Engr.

W. G. Nickol, B. S. in C. E., Jr. Hwy.

Engr.

A. G. Seigle, B. S. in C. E., Jr. Hwy. Engr.

R. T. Turner, B. S. in C. E., Jr. Hwy. Engr.

New Mexico-Santa Fe:

H. P. Martin, B. S. in C. E., Hwy. Engr.

L. C. Rockett, B. S. in C. E., Assoc. Hwy. Engr.

District No. 11 (Hdqrs., Juneau, Alaska).
M. D. Williams, B. S., Dist. Engr. in oharge.

Alaska-Juneau (hdqrs. for dist.):

M. D. Williams, B. S., Dist. Engr.

I. F. Winsor, Assoc. Hwy. Engr. R. C. Ingram, Assoc. Hwy. Engr.

L. W. Turoff, B. S. in C. E., Asst. Hwy. Engr.

C. W. Wilson, Asst. Hwy. Engr.

C. F. Wyller, C. E., Asst. Hwy. Engr.
B. M. French, B. S. in C. E., Jr. Hwy.
Engr.

District No. 12 (Hdqrs., Ogden, Utah).

B. J. Finch, C. E., Dist. Engr. in charge. Idaho—Boise:

E. E. Kidder, B. C. E., Sr. Hwy. Engr.

Utah—Ogden (hdqrs. for dist.): B. J. Finch, C. E., Dist. Engr.

R. R. Mitchell, B. S. in C. E., Sr. Hwy. Engr.

L. M. Huggins, B. S. in C. E., Sr. Hwy. Bridge Engr.

F. W. Smith, B. S. in C. E., Hwy. Engr.

J. H. Young, Hwy. Engr.

R. A. Brown, Assoc. Hwy. Engr.

J. F. English, C. E., Assoc. Hwy. Engr.

P. Linford, Assoc. Hwy. Engr.

O. C. Lockhart, Assoc. Hwy. Bridge Engr.

J. E. Anderson, Asst. Hwy. Engr.

K. B. Campbell, Asst. Hwy. Engr.K. S. Chamberlain, B. S. in A. E.,

Asst. Hwy. Engr. F. H. Cotter, Asst. Hwy. Engr.

F. H. Cotter, Asst. Hwy. Engr. Ernest Gilgen, Asst. Hwy. Engr.

Ernest Lubeck, Asst. Hwy. Bridge Engr.

J. A. West, Asst. Hwy. Engr.

M. Christensen, B. S. in C. E., Jr. Hwy. Engr.

F. L. Davis, B. S. in C. E., Jr. Hwy. Engr.

District No. 12-Continued.

Utah-Ogden-Continued.

B. P. DuBose, B. S. in C. E., Jr. Hwy. Engr.

W. F. Heyman, B. S. in C. E., Jr. Hwy. Engr.

E. L. Jordan, B. S. in C. E., Jr. Hwy. Engr.

Horace Miller, B. S. in C. E., Jr. Hwy. Engr.

L. H. Miller, A. B. in E., Jr. Hwy. Engr.

Thurman Pryor, B. S. in C. E., Jr. Hwy. Engr.

District No. 12-Continued.

Utah-Ogden-Continued.

W. E. Reed, B. S. in C. E., Jr. Hwy. Engr.

C. R. Salmen, B. S. in C. E., Jr. Hwy. Engr.

#### SPECIAL ASSIGNMENTS

C. Older, B. S. in C. E., Consult. Hwy. Engr.
C. J. Tilden, B. S. in C. E., M. E., Hwy. Research Spec.

H. R. Trumbower, A. B., Sr. Agr. Transp. Econ.

#### WEATHER BUREAU

C. F. Marvin. M. E., Chief.

C. C. Clark, LL. B., LL. M., D. C. L., Asst. Chief.

William Weber, Jr. Admin. Off., Chief Clerk.

G. M. Richards, Sr. Admin. Asst., in charge of Div. of Stas. and Accts.

B. F. Larcombe, Admin. Asst., in charge of Printing Div.

D. Y. Engell, Admin. Asst., in charge of Div. of Supplies.

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I. R. Tannehill, B. S., Assoc. Met.

A. J. Haidle, Asst. Met.

T. R. Brooks, Chief Sci. Aid.

# District Forecasting.

C. L. Mitchell, Prin. Met., Forecr.

R. H. Weightman, LL. B., Sr. Met., Forecr.

W. R. Stevens, A. B., Asst. Met.

#### River and Flood Division.

M. W. Hayes, Prin. Met., Chief.

W. J. Moxom, Assoc. Met.

# Monthly Weather Review.

A. J. Henry, Prin. Met., Ed.

#### Meteorological Physics.

W. J. Humphreys, A. B., C. E., Ph. D., Prin. Met., in charge.

# Solar Radiation Investigations.

H. H. Kimball, B. S., M. S., Ph. D., LL. D., Sr. Met., in charge.

I. F. Hand, Jr. Met.

#### Climatological Division.

O. L. Fassig, B. S., Ph. D., Sr. Met., Chief.

M. C. Bennett, M. D., Asst. Met.

W. W. Reed, Asst. Met.

#### Aerological Division.

W. R. Gregg, A. B., Prin. Met., Chief.

L. T. Samuels, Assoc. Met.

W. C. Haines, Asst. Met.

P. A. Miller, Asst. Met.

L. A. Stevens, Asst. Met.

R. E. Gumpf, Jr. Met.

# Instrument Division.

B. C. Kadel, Sr. Met., Chief.

S. P. Fergusson, Assoc. Met.

R. N. Covert, Asst. Met.

A. H. Mears, B. S., A. B., A. M., Assoc. Met.

J. H. Jones, Chief Sci. Aid.

# Division of Agricultural Meteorology.

J. B. Kincer, Sr. Met., Chief.

W. A. Mattice, Asst. Met.

#### Library.

C. F. Talman, Assoc. Libr., in charge.

#### Marine Division.

W. F. McDonald, Met., Chief.

F. A. Young, C. E., Prin. Sci. Aid.

W. E. Hurd, Chief Sci. Aid.

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Chicago Dist. (Illinois, Indiana, Michigan, Wisconsin, Minnesota, Iowa, Missouri, Kansas, Nebraska, South Dakota, North Dakota, and the Upper and Lower Lakes).

C. A. Donnel, Prin. Met., Forecr., in charge.

W. P. Day, A. B., Assoc. Met., Asst. Forecr.

Denver Dist. (Colorado, New Mexico, Arizona, Utah, Wyoming, and Montana).

J. M. Sherier, Prin. Met., Foreer., in charge.

E. B. Gittings, jr., Sr. Met., Asst. Forecr.

New Orleans Dist. (Louisiana, Mississippi, NW. Florida, Arkansas, Texas, and Oklahoma).

I. M. Cline, A. B., A. M., M. D., Ph. D., Prin. Met., Forecr., in charge.

R. A. Dyke, Sr. Met., Asst. Forecr.

San Francisco Dist. (California, Nevada, Oregon, Washington, and Idaho).

E. H. Bowie, M. Sc., Prin. Met., Forecr., in charge.

T. R. Reed, Sr. Met., Asst. Forecr.

Washington Dist. (States east of Mississippi River except Illinois, Indiana, Michigan, Mississippi, and Florida).

C. L. Mitchell, Prin. Met., Forecr.

R. H. Weightman, LL. B., Sr. Met., Forecr.

#### GENERAL WEATHER SERVICE AND RESEARCH

Alabama:

Birmingham-

E. C. Horton, B. S., Jr. Met.

Mobile-

Albert Ashenberger, Asst. Met.

Arizona-Yuma:

J. H. Gordon, B. S., Jr. Met.

Arkansas-Fort Smith:

W. C. Hickmon, Asst. Met.

California:

Bakersfield-

L. J. Guthrie, Jr. Met.

Eureka-

James Jones, Jr. Met.

Fresno-

W. E. Bonnett, Asst. Met.

Los Angeles-

H. B. Hersey, B. S., M. S., Sr. Met.

R. L. Fisher, Assoc. Met.

Red Bluff-

P. E. Garrison, Sr. Obsr.

Sacramento-

N. R. Taylor, Asst. Met.

San Diego-

Dean Blake, Assoc. Met.

San Jose-

G. F. Von Eschen, Sr. Obsr.

Colorado:

Grand Junction-

E. L. Felton, Asst. Met.

Pueblo-

H. B. Dick, Asst. Met.

Connecticut:

Hartford-

Llewellyn Raplee, Jr. Met.

New Haven-

L. M. Tarr, A. B., M. A., Assoc. Met.

H. E. Hathaway, Jr. Met.

Florida:

Apalachicola-

G. P. Rusmisel, Jr. Met.

Key West— H. B. Boyer, Asst. Met. Miami-

R. W. Gray, Asst. Met.

Pensacola-

E. W. Holcomb, Asst. Met.

Tampa-

W. J. Bennett, B. S., Assoc. Met.

Georgia:

Augusta-

E. D. Emigh, Asst. Met.

Harry Raynes, Jr. Met.

Savannah-

C. M. Strong, Asst. Met. W. A. Mitchell, Jr. Met.

Thomasville-

O. M. Hadley, B. S., Jr. Met. Idaho:

Lewiston-

W. W. Thomas, Jr. Met.

Pocatello-

A. R. Teeple, B. S., Jr. Met. Illinois:

Cairo-

W. E. Barron, Asst. Met.

Chicago-

C. A. Donnel, Prin. Met.

W. P. Day, A. B., Assoc. Met.

O. T. Lay, Assoc. Met.

A. H. Christensen, Asst. Met.

L. T. Pierce, B. S., Asst. Met.

P. E. Johnson, Jr. Met.

F. J. Thomas, Jr. Met.

F. B. Whitney, Jr. Met.

M. O. Swenson, Jr. Met.

Peoria-

M. L. Fuller, M. A., M. Did., Asst. Met. Indiana:

Evansville-

M. S. Collom, Asst. Met.

C. C. Williford, Jr. Met.

Fort Wayne-

E. L. Hardy, Asst. Met.

Terre Haute-

O. E. Moery, A. B., Asst. Met.

Iowa:

Charles City-

E. G. Larson, Jr. Met.

Davenport-

T. G. Shipman, Assoc. Met.

S. E. Decker, Jr. Met.

Dubuque-

L. W. Dick, Asst. Met.

Keokuk-

R. M. Anderson, Sr. Obsr.

Sioux City-

G. K. Greening, Asst. Met.

Kansas:

Concordia-

E. C. Corkhill, Jr. Met.

Dodge City-

A. A. Justice, Jr. Met.

Iola-

Marsden Wright, Jr. Met.

Wichita-

M. B. Stubbs, A. B., M. A., Ph. D., Asst. Met.

Kentucky-Lexington:

G. B. Wurtz, Asst. Met.

Louisiana-Shreveport:

J. W. Cronk, Asst. Met.

Maine:

Eastport-

J. J. Murphy, Jr. Met.

Portland-

R. M. Dole, Asst. Met.

H. H. Roche, Jr. Met.

Massachusetts-Nantucket:

G. E. Grimes, Jr. Met.

Michigan:

Alpena-

Abe Wiesner, Asst. Met.

Detroit-

N. B. Conger, Sr. Met.

C. D. C. Thompson, Asst. Met.

Escanaba-

H. H. Spindler, Asst. Met.

Grand Haven-

W. J. Rice, Jr. Met.

Grand Rapids-

W. H. Tracy, Asst. Met.

Houghton-

H. B. Cowdrick, Jr. Met.

Ludington-

C. H. Eshleman, B. S., Jr. Met.

Marquette-

H. R. Patrick, Asst. Met.

Port Huron-

H. H. Waters, Jr. Met.

Sault Ste. Marie-

A. G. Burns, Jr. Met.

Minnesota:

Duluth-

Frank Jermin, Assoc. Met.

Moorhead-

R. J. McClurg, Jr. Met.

St. Paul-

M. R. Hovde, Asst. Met.

Mississippi-Meridian: E. E. Unger, Asst. Met.

Missouri:

Hannibal-

B. L. Waldron, B. S., Asst. Met.

Kansas City-

A. M. Hamrick, Assoc. Met.

R. L. Anderson, Asst. Met.

St. Joseph-

W. S. Belden, B. S., Asst. Met.

St. Louis-

Roscoe Nunn, Sr. Met.

H. C. Gross, Asst. Met.

Springfield-

W. W. Talbott, Asst. Met.

Montana:

Havre-

F. A. Math, Asst. Met.

Kalispell-

E. K. Lovett, Obsr.

Miles City-

B. P. Hughes, Jr. Met.

Nebraska:

North Platte-

A. W. Shilling, Asst. Met.

M. V. Robins, Met.

R. M. Aldrich, Jr. Met.

Valentine-

B. E. Hall, Obsr.

Nevada-Winnemucca:

J. W. Smith, Asst. Met.

New Hampshire-Concord:

E. C. Vose, Jr. Met.

New Jersey:

Atlantic City-

W. L. Day, Jr. Met.

Sandy Hook-

C. F. Hand, Jr. Met.

New Mexico:

Albuquerque-

S. P. Peterson, Assoc. Met.

J. M. Brady, Jr. Met.

Roswell-

Cleve Hallenbeck, Asst. Met.

New York:

Albany-

G. S. Lindgren, Assoc. Met.

H. E. Vail, A. B., M. A., Jr. Met.

Binghamton-

W. W. Neifert, Assoc. Met.

Buffalo-

J. H. Spencer, Sr. Met.

A. P. Keller, Jr. Met.

Canton-

H. E. Heyer, B. S., Jr. Met.

New York-

J. H. Scarr, Prin. Mct.

J. H. Kimball, B. S., M. A., Ph. D.,

Assoc. Met.

H. M. Wills, B. S., Assoc. Met.

Benjamin Parry, Asst. Met.

D. R. Morris, Jr. Met.

Samuel Deitch, Jr. Met.

Oswego-

J. M. Howe, Jr. Met.

Rochester-

J. L. Vanderpool, Asst. Met. Syracuse-

J. C. Fisher, B. S., Assoc. Met.

C. E. Lamoureux, B. S., Jr. Met.

North Carolina:

Asheville-

T. R. Taylor, Jr. Met.

Charlotte-

S. S. Schworm, Asst. Met.

Greensboro-

J. P. Molen, Asst. Met.

Hatteras-

R. B. Dailey, Jr. Met.

Wilmington-Paul Hess, Asst. Met.

North Dakota: Devils Lake-

R. E. Kearney, Jr. Met.

Williston-

R. O. Miller, B. Pd., Jr. Met.

Cincinnati-

W. C. Devereaux, Sr. Met.

W. B. Schlomer, Asst. Met.

J. T. Gray, A. B., Jr. Met.

Cleveland-

G. H. Noyes, A. B., Sr. Met.

M. W. Davis, Asst. Met.

Dayton-

J. S. Hazen, B. S., Asst. Met.

130 Ohio-Continued. Sandůsky-C. C. Cooper, Asst. Met. Toledo-W. S. Currier, B. S., Asst. Met. F. E. McLeary, Jr. Met. Oregon: Baker-H. H. Smith, Sr. Obsr. Medford-W. J. Hutchison, Asst. Met. Roseburg-E. H. Fletcher, Ph. G., Jr. Met. Pennsylvania: Bellefonte-H. P. Parker, Asst. Met. Erie-R. W. Thomas, Asst. Met. Harrisburg-C. S. Ling, Asst. Met. C. R. Peck, Jr. Met. Pittsburgh-W. S. Brotzman, Assoc. Met. C. A. Belt, Asst. Met. Reading-C. J. Doherty, Asst. Met. Scranton-R. C. West, Asst. Met. Rhode Island: Block Island-J. B. Underwood, Jr. Met. Providence-C. S. Wood, Asst. Met. South Carolina: Charleston-J. E. Lockwood, Asst. Met. Greenville-G. C. Merchant, A. B., Jr. Met. South Dakota: Pierre-W. J. Centen, Jr. Met. Rapid City-H. N. Johnson, Jr. Met. Yankton-E. T. Lay, A. B., Sr. Obsr. Tennessee: Chattanooga-C. E. Hadley, Asst. Met. Knoxville-J. E. Sanders, Asst. Met. Memphis-F. W. Brist, Assoc. Met. A. R. Long, Jr. Met. A. L. King, A. B., Jr. Met. Texas: Abilene-W. H. Green, Jr. Met. Amarillo-H. T. Collman, Asst. Met. A. R. W. Stoesen, Sr. Obsr. Brownsville-

W. J. Schnurbusch, Asst. Met.

J. P. McAuliffe, Asst. Met.

Corpus Christi-

Texas-Continued. Dallas-J. L. Cline, B. S., M. A., Ph. D., Assoc. Met. Del Rio-H. L. Molyneux, Jr. Met. El Paso-R. M. Shaver, Asst. Met. Fort Worth-D. S. Landis, Asst. Met. Galveston-I. C. Plummer, Asst. Met. P. S. Cook, Asst. Met. Palestine-A. W. Pugh, Jr. Met. Port Arthur-Ernest Carson, Jr. Met. San Antonio-J. H. Jarboe, Asst. Met. E. H. Marx, Jr. Met. Taylor-E. W. Torrence, Jr. Met. Utah-Modena: J. T. Williams, Sr. Obsr. Vermont: Burlington-M. W. Dow, Asst. Met. Northfield-W. A. Shaw, B. S., M. S., Jr. Met. Virginia: Cape Henry— J. F. Newsom, Asst. Met. Lynchburg-G. N. Wilson, Asst. Met. Norfolk-C. H. Richardson, Asst. Met. G. S. Kennedy, Jr. Met. Wytheville-S. B. Trotter, Jr. Met. Washington: North Head-P. R. Hill, Jr. Met. Port Angeles-L. G. Sutton, Asst. Met. Spokane-E. M. Keyser, A. B., Asst. Met: Tacoma-L. C. Cover, Jr. Met. Tatoosh Island-Fred Myers, Jr. Met. Walla Walla-C. C. Garrett, Asst. Met. Yakima-E. H. Jones, Asst. Met. West Virginia-Elkins: H. A. Jones, A. B., Jr. Met. Wisconsin: Green Bay-Fred Cone, Jr. Met. La Crosse-E. C. Thompson, B. S., Jr. Met. Madison-E. R. Miller, B. S., M. S., Assoc. Met. A. F. Piippo, Jr. Met. Wausau-A. E. Osborn, A. B., Jr. Met.

Wyoming:

Lander-

H. D. Spangler, Sr. Obsr.

Sheridan-

W. L. Wyland, Asst. Met.

Yellowstone Park-

W. T. Lathrop, Asst. Met.

### CLIMATOLOGICAL SECTION **HEADQUARTERS**

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F. C. Hood, Jr. Met.

Alaska—Juneau:
R. C. Mize, Assoc. Mct.

H. W. Douglas, B. S., Asst. Met.

Arizona-Phoenix:

R. Q. Grant, M. E., Assoc. Met.

W. B. Hare, Jr. Met.

Arkansas-Little Rock:

H. S. Cole, A. B., B. S., Assoc. Met. California-San Francisco:

E. H. Bowie, M. Sc., Prin. Met.

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